The Croonian Lectures

ON THE

PHARMACOLOGICAL ACTION AND THERAPEUTIC USES OF THE NITRITES AND ALLIED COMPOUNDS.

Delivered at the Royal College of Physicians of London on June 27th,

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LECTURE III.—THERAPEUTIC USES OF THE NITRITES AND NITRATES.

MR. PRESIDENT AND GENTLEMEN,—In considering the bearing of the pharmacological action of the nitrites on their therapeutic application there are three points worthy of note. The first is the minute quantities which may influence the vascular system and, as a consequence, certain functions of the body. An eighth of a grain of sodium nitrite, a small but uncertain fraction of a minim of ethyl nitrite, or the sixteen-hundredth of a grain of nitro-glycerine will in many distinctly affect the circulation. A second point is that, notwithstanding their potency, even large quantities of the nitrites and nitro-glycerine do not readily cause death. Although unpleasant and even alarming results have been known to follow the administration of comparatively small doses there has been, as far as I know, only one case recorded in which a fatal result has been attributed to their medicinal use. This is the more worthy of notice since these drugs have been commonly given in serious cases. I do not know of an instance in which ethyl nitrite or sodium nitrite has proved fatal, though very large doses of the latter have been administered. Amyl nitrite has been taken by the dessertspoonful, yet recovery has, I believe, always occurred, and severe though the symptoms are which follow its inhalation no harm has ever accrued from its employment, save in one instance, a case of phthisis, where death followed the inhalation of seven drachms. Considerable quantities of nitro-glycerine have been taken with impunity, so far at least as concerns a fatal result; only in a few instances have very large amounts, taken accidentally or for suicidal purposes, caused death. A third point which it is important to bear in mind is the evanescence of nitrite action. When nitrites advantageously alter functions their direct influence for good usually soon ceases; on the other hand, their evil effects are also short-lived; there is no cumulative influence. The pharmacology of the nitrites and nitro-glycerine indicates the class of cases in which these drugs will be of the most utility—namely, those in which the heart is embarrassed in its work owing to a want of due relationship between its power and the calibre of the vessels through which it transmits blood.

ANGINA PECTORIS.

Angina pectoris is the most conspicuous ailment of this class. It would be out of place here for me to discuss its pathology and its various forms, but there are one or two points to which I must allude, because they are intimately connected with the use of nitrites. Angina pectoris has been defined by Sir Richard Quain as an affection of the chest accompanied by severe pain, faintness and anxiety occurring in paroxysms connected with disorders of the pneumogastric and sympathetic nerves and their branches, and frequently associated with organic disease of the heart.

It is manifest that for the production of angina as thus defined a variety of pathological conditions may suffice. Alterations in the cardiac nerves and plexuses due to intrinsic structural changes or to their involvement in diseased conditions of adjacent organs may lead to periodic neuralgic attacks similar to those which we see in other parts of the body when nerves or plexuses are similarly affected. Neuralgic pains referred to the heart may be the outcome of reflected irritation originating elsewhere, as, for example, in the abdominal organs. Hysterical pains may be felt in the cardiac region as well as in other parts. All these causes may perhaps lead to paroxysmal pain apart, or almost so, from circulatory changes connected with alteration in tension; but clinical observations do, I think, indicate that a large proportion of anginal attacks are directly caused by a rise in tension, and there seem to me good grounds for believing that this rise is due to a temporarily decreased calibre of the systemic or pulmonary vessels and a consequent suddenly increased call on the propelling action of a heart the walls of which are more or less altered in structure. In some cases, as Dr. Douglas Powell has so well pointed out,[1] the call may be made upon a diseased heart (angina pectoris gravior); in others there is more or less cardiac reserve power and integrity (angina pectoris vaso-motoria); but in both forms the symptoms are due to the fact that the heart is unequal to the work it is called on to perform. With a view to removing the high tension ensuing from this contraction, Dr. Brunton first made trial of amyl nitrite in angina pectoris and discovered its wonderful power of relieving the cramp-like pain which accompanies this ailment. Of late, however, doubts have been raised as to whether high tension is really the cause of pain, and it has been suggested that nitrites relieve, not because they lower tension, but because they act as analgesics and remove the pain which causes high tension. It seems to me that for this theory there is but little foundation; experiments, as I have said, give no indication that nitrites are direct analgesics; in poisonous doses, indeed, they depress the functions of all portions of the nervous system, but the afferent portion is the last which is affected. So powerful an analgesic as morphine not unfrequently fails to relieve the pain which a minute dose of amyl nitrite at once removes, and there is, I hold, no warrant for the assumption that nitrites or nitro-glycerine has a special analgesic influence on the cardiac plexus. I cannot see sufficient ground in what has so far been advanced for calling in question the opinion that increased tension is the cause of suffering in a large proportion of cases in which paroxysmal pain is referred to the heart; and that in the treatment of angina pectoris it is important, in the first place, to lower this tension as speedily and efficaciously as possible. In the reduction of tension by nitrites we have three objects in view: (1) to relieve pain as rapidly as possible; (2) to avert a fatal termination; and (3) to prevent the recurrence of pain. The second object is for the time attained when the pain is removed. The pain of angina varies greatly in duration; generally it is short in the earlier stages of the disease and abates quickly when the immediate cause, usually some movement, has ceased. Not unfrequently, especially towards the termination of a long-standing case, agonising pain is present for many minutes, sometimes for many hours; but, whether the duration of pain be short or long, those nitrites are manifestly, in the first instance, called for which act most quickly. What I have stated with regard to the time at which the influence of the various nitrites on the circulation is first distinctly perceptible points clearly to the drugs which may most advantageously be used during anginal pain. It has been shown that propyl, isobutyl and amyl nitrites reduce the tension in a few seconds, whilst sodium nitrite takes from two to five minutes to act and ethyl nitrite about the same time. Even nitro-glycerine, which affects the circulation in from forty seconds to two minutes, acts much less rapidly than do the fatty nitrites when they are inhaled.

Manifestly, then, to relieve urgent pain and its concomitant danger, the fatty nitrites should be inhaled. Hitherto an impure nitrite has been chiefly used for this purpose. The nitrite of amyl of the British Pharmacopœia is a mixture of many nitrites and contains likewise amyl alcohol and oxidation products such as valeric aldehyde, valeric acid, and amyl valerate. Dunstan and Woolley in one specimen found less than 40 per cent. of the amyl nitrite and in another 50 per cent., but in addition 10 per cent. of isobutyl nitrite.[2] Even the impure amyl nitrite now used is a most valuable drug, but, considering the importance of the influence required, it seems desirable that a more definite compound should, if possible, be introduced. Of late isobutyl nitrite has been employed occasionally as a substitute for amyl nitrite. Professor Cash finds isobutyl and secondary propyl nitrites somewhat more active in reducing tension than the amyl compound. It has appeared to me, too, that isobutyl nitrite more certainly relieves anginal pain than does the official amyl nitrite.

[1] Practitioner, vol. xlvi., p. 255.
[2] Pharmaceutical Journal, 1888, p. 489.

The inhalation of amyl nitrite sometimes fails to relieve the pain of angina pectoris; this failure may arise from several causes: 1. The paroxysms may be due to neuralgia of local origin, or it may be reflected or hysterical, and circulatory changes may take but little part in its production. In such conditions nitrite inhalations can do no harm, yet they may fail to relieve pain. 2 In some cases the nitrite does not remove pain because of the short duration of its action. It does not break the spell of the vessel contraction. There may be relief, but it is not complete, and when in a minute or two the effect of the drug passes off the wave of contraction returns, and with it the pain. 3. Some persons are curiously insusceptible to the influence of amyl nitrite. In such patients full inhalations may succeed when slight ones fail, though this is not very common. If a certain measure of success is not obtained with ordinary inhalation, it is not often that a more copious use of amyl nitrite completely removes anginal pain. 4. Lastly, in very advanced cases where the attacks of pain continue long, amyl nitrite may entirely fail to relieve the pain, though in an earlier stage it proved useful for this purpose.

If from any of these causes amyl nitrite does not remove pain one of the nitrites whose effects are more persistent should be tried. Of the official preparations, nitro-glycerine is by far the best. On referring to the table it will be seen that it reduces tension more quickly than sodium nitrite, and more quickly, too, than ethyl nitrite. Beginning with one drop of liquor trinitrini, the dose may be gradually increased until either the pain is relieved or unpleasant physiological effects, such as throbbing in the head or palpitation, show that no more can be borne. In pain of hysterical or reflected origin this physiological limit is often quickly reached; but in other cases very large doses may be given before relief is obtained. Dr. Murrell, to whom we owe the introduction of nitro-glycerine as a remedy for angina pectoris, has given, as I have said, 110 minims eight times daily. Some are very insusceptible to nitrites, especially when passing through a dyspnœic attack, and it is worthy of note that the same individual may be more susceptible at one time than another.

A patient from whom several of the tracings I show have been taken came into the infirmary with intense dyspnœa and cyanosis and some cardiac dilatation. The nitrites of amyl and ethyl seemed to have no effect in relieving the dyspnœa and the ordinary effect of the amyl compound he did not feel. Nothing was of service except free venesection, which at once relieved him. The next day even his pulse was somewhat refractory to nitrites, ordinary doses of sodium and amyl nitrites only affecting his circulation slightly. The pulse tracing, taken a month later, showed that he was then fairly susceptible to two grains of sodium nitrite; then he commenced to take the nitrites regularly and in another month I found the tension of his pulse to be but little influenced by this dose, though by stronger doses it was readily brought down. As I have before said, people with high tension are less affected by nitrites than those with low tension. I have several times had occasion to gradually raise the dose of liquor trinitrini to twenty minims. It not unfrequently happens that larger doses are required as a case progresses, and I believe it is far safer to employ somewhat large doses of nitro-glycerine than to resort to morphia injections, which in the later stage of angina pectoris generally fail to give relief and, I suspect, at times hasten the fatal termination. Let me say here that I look on the injections of morphine in severe paroxysmal cardiac pain as being by no means devoid of danger. It is quite true that they often give relief in anginal attacks and are not usually followed by dangerous symptoms, but I have myself twice seen death occur shortly after subcutaneous injection of morphine in a prolonged anginal attack, and in the experience of others I find that a fatal termination is so frequently a sequence of an injection of morphine that it savours strongly of cause and effect. From the use of nitrites I can find no evidence that fatal results appear to follow, notwithstanding the large doses in which they have been given and the critical condition of many of the patients who have taken them. On the other hand, I have several times seen reason for believing that life has been shortened owing to the want of nitrites or to their use in too niggardly a fashion, and on more than one occasion it has seemed to me as if the immediate cause of death has been an unreplenished nitrite bottle. Every person who suffers from angina pectoris and who has derived relief from nitrites should have immediately at hand amyl nitrite or the tabellæ or liquor trinitrini. To prevent the recurrence of anginal attacks amyl nitrite is, of course, of no service, but nitro-glycerine is as useful in preventing attacks as in relieving them. A sufficient dose should be given a few minutes before an exertion is made which is likely to cause an attack of pain. The amount which is sufficient can only be determined by the effect on the patient; sometimes one drop will suffice to ward off attacks for two or three hours, but oftener larger doses are required. One patient, for example, finds that not less than twenty-five drops are necessary in order to enable him to perform light work for some hours, and for six months he has, by the aid of this dose once or twice daily, been enabled to live and to earn a livelihood in fair comfort. Danger, I believe, arises, not from the size of the dose or from its frequent repetition, but from too great fear of the drug. In those in whom the anginal pains are connected with serious cardiac degeneration the time at length arrives when severe cardiac pain, which may be long-continued, comes on without apparent cause and the end is then usually near at hand. Here the frequent use of large doses of liquor trinitrini will not suffice either to prevent or to ward off all pain, but it is the most effective means we possess, and if it does not prevent suffering it at least mitigates it without adding to the danger. Nitro-glycerine is so quickly absorbed in the stomach that subcutaneous injection is, as a rule, not necessary; but in cases of urgency, where there is fear that the absorptive power of the stomach is in abeyance, it may be resorted to. At times nitro-glycerine is not well borne, owing to the headache which it causes; sodium or ethyl nitrite may then be tried, especially for the purpose of preventing paroxysms. The sodium compound may be used, beginning with two-grain doses, but I do not think it usually agrees so well with patients as nitro-glycerine when large doses are required. A 2½ per cent. solution of ethyl nitrite in absolute alcohol I have often used, giving doses of one or two teaspoonfuls. The solution should be mixed with water immediately before being taken, otherwise the nitrite rapidly escapes. Of late I have employed the ethyl nitrate, which has a distinctly longer-lasting influence in reducing tension than the nitrite, and in some ten or twelve cases in which I have used it the testimony in favour of its prolonged beneficial action has been satisfactory. A medical man who has been under my care for angina pectoris has at my request compared on himself the effects of various nitrites and he places the nitrate of ethyl distinctly above the others in the length of time for which it wards off the attacks. In another case, that of a woman aged twenty-eight, who had suffered from anginal attacks for three or four months, and who found relief during the attacks both from nitro-glycerine and the inhalation of amyl nitrite, I found that nitrate of ethyl gave more continuous relief than nitro-glycerine. For two or three days she took three-minim doses of the ethyl nitrate at intervals of three or four hours; in this quantity the attacks, though not prevented, were lessened in frequency. As the heart's action seemed to be quickened she returned to the occasional use of the nitro-glycerine, but soon afterwards the attacks became more frequent and less amenable to relief by this drug. One morning, in the absence of one of my colleagues, I saw her and found her with severe cardiac pain, which had lasted for an hour, and which nitrite of amyl and nitro-glycerine in small doses had failed to relieve. A drachm of a 10 per cent. solution of nitrate of ethyl, the last I happened to have at the time, was then given to her. In ten minutes the tension was lowered, as shown by the tracing, and the pain had entirely disappeared. A few hours later it recurred. Nitro-glycerine gave slight relief, but only for a very short time; nitrite of amyl failed entirely to remove the pain. A subcutaneous injection of morphine guarded by atropine was now cautiously given, only two doses of the eighth of a grain being injected with an interval of half an hour. Hardly the slightest relief followed, the pain continuing for three hours, when she became cyanotic and died somewhat suddenly. At the post-mortem examination the aortic valves were found to be insufficient, one of the coronary arteries was small and the other was almost obliterated. My experience of the use of nitrate of ethyl in angina pectoris and other ailments is not sufficiently large to enable me to form a definite opinion as to its value as compared with nitrites, but the long period during which it lowers tension in healthy subjects and its very definite effects in the few cases of angina in which I have tried it leads me to think it may prove to be of value. The nitrates of propyl, isobutyl and isoamyl are as effective in lowering tension as nitrate of ethyl, but the tendency to cause headache, which is, I think, even more marked with the nitrate than the nitrite of ethyl, is a still more prominent feature in the action of the propyl, isobutyl and isoamyl compounds, and I have not used them

medicinally. Although I regard the nitrites and the organic nitrates as of the greatest value in relieving and preventing anginal attacks and in helping to ward off the fatal result in which any attack might terminate, I cannot rank them highly as curative agents. Doubtless, when attacks of angina are warded off and rendered less severe by the use of tension depressors, recovery does at times take place, as Dr. Murrell has well shown in some of the cases which he has so graphically described in his book on "Nitro-glycerine." The relief from pain and suffering may tend to prolong life and when regularly given the heart's work may be so decreased that its nutrition may improve. Perhaps, too, the vessel walls gain some advantage from the fact that under the influence of the nitrites their continued contest with the blood current is somewhat lessened; but I am by no means satisfied that the recoveries from angina pectoris which have been reported after the administration of nitrites and nitro-glycerine are really due to these drugs. Their employment is only one element, though an important one, in the treatment of angina. It should be accompanied by the use of those agents calculated permanently to improve the condition of the vascular system, amongst which I believe iodide of potassium and arsenic to hold a foremost place.

CARDIAC DYSPNŒA.

Next to the relief of angina the nitrites are of most service in the prevention of dyspnœa connected with other forms of cardiac and with pulmonary disease. The theories which have been broached to account for cardiac dyspnœa are many in number, but hyper-distension of the pulmonary vessels is regarded in most cases as the immediate cause of the continued shortness of breath associated with cardiac dilatation and valvular lesions. The heart is at times unable to send the blood on its way through the system because, owing to the weakening of its walls or the narrowing of the vessels, there is a disproportion between the power of the heart and the obstacle it has to overcome; from these causes or from a defective valve the pulmonary vessels may be kept constantly over-full. The dyspnœal paroxysms may depend immediately on many causes, but most frequently they are due to a sudden increase in the difficulty which the heart experiences in driving the blood onwards through the systemic system, either from a passing increased narrowness of the arterioles or from a temporary failure of cardiac power. Paroxysms of dyspnœa in cardiac disease may likewise occur from exacerbations of pulmonary hyperæmia and œdema. Unfortunately, it is not always possible to determine whether attacks of dyspnœa with which we have to deal are due to heart failure, vascular contraction or some other cause; often, indeed, more causes than one are present, hence the difficulty of coming to any conclusions as to the cases in which tension reducers may be of service, but in certain forms of cardiac trouble they are usually of special value. In the dyspnœic attacks which so often accompany cardiac dilatation connected with alcohol, gout &c. I have seen nitrites of ethyl and sodium and nitro-glycerine give much relief. By dilating the vessels for a time they enable the heart to do its work and thus relieve the congestion of the pulmonary vessels. The question arises, If the dyspnœic attacks are connected with cardiac failure can they do harm in virtue of their cardiac depressant influence? I believe that large doses might work evil, but in small quantities, such as from one to two drops of nitro-glycerine, from one to two drachms of the 2½ per cent. solution of nitrite of ethyl, or two grains of sodium nitrite, the action is always in favour of the heart. These small quantities can powerfully dilate the vessels, but they do not, in an important measure, depress the heart. Experiments on animals, as I have pointed out, show that very small quantities increase rather than decrease the amount of work a heart can do. I have given the doses I have named in a very large number of cases, and I have never seen the slightest indication pointing to possible evils. The amount administered may be cautiously increased without any risk if the relief be insufficient or if the efficacy first noticed seems afterwards to fail. In the case of nitrites, increase of danger is not proportioned to increase of dose. When relief is not obtained by a small dose, and when no physiological effects follow such as throbbing in the head or palpitation, I find that it is quite safe to repeat the dose in half an hour. It is desirable, when the larger doses are given or when the drug is given more frequently, that the patient should rest. Discomforts which have arisen after small doses of the nitrite, such as three grains of sodium nitrite, have for the most part occurred in those who have been pursuing their ordinary avocations. I am not deterred from giving nitrites in dyspnœa by irregularity or weakness of the pulse, for I find that in dyspnœa they do not tend to cause syncope or lead to heart failure. Dr. Sansom has published a case in which a patient with an extremely weak and irregular heart's action was in the habit of taking six to twelve nitro-glycerine tablets daily without medical advice. I have met with one or two similar instances in which persons with very dilated hearts have found such relief from nitro-glycerine tablets that they have continued to take them for months, and I have no doubt that many sufferers take them habitually without advice. I can easily conceive that grave mischief might arise, but so far I have met with no record of it. Fortunately there seems to be a special tolerance of nitrites in such cases. When with cardiac dilatation moist sounds at the bases of the lungs give evidence of bronchitis or lung œdema the nitrites generally fail to relieve, but by no means always. Partial relief is, indeed, not uncommon, and a few doses of a nitrite are always worthy of trial. In the paroxysms of dyspnœa which occur in many valvular diseases of the heart the nitrites are sometimes of great service; but here, as in simple cardiac dilatation, they often fail when there are abundant moist sounds at the bases of the lungs. They will fail to remove dyspnœa too, as all other remedial agents will fail, in very advanced conditions of cardiac disease, yet even in the most unpromising cases they are at times of the greatest value in the relief of distress, so much so that patients will often beg for the repetition of the dose which has given them so much comfort. The nitrites are naturally most useful in mitral disease, since here paroxysmal dyspnœa is more frequent than in aortic troubles, but aortic incompetence is no bar to the use of nitrites in small quantities when the breathing is oppressed. In valvular disease, as in simple dilatation, weakness and irregularity of the heart's action need not be taken into account in giving small doses of the nitrites for dyspnœic attacks; such doses do no harm even if they do no good. In a few cases, as I have already said, I have known irregularities cease under their employment.

Against the utility of nitrites in cardiac dyspnœa it might be urged that as their vascular influence is but transitory so also will be the relief they give, and this is true; but here, as in the case of other remedies, we find that relief is not limited to the period during which the medicine directly acts. When unduly contracted arteries are dilated they do not forthwith resume their contracted condition as soon as the effect of the nitrite on the vessel wall has passed away. Whether the dilatation of the pulmonary vessels by nitrites is one factor in the relief they give in cardiac dyspnœa we cannot say, but the very marked effect they can be shown experimentally to produce in dilating these vessels seems to render it likely that, besides increasing the calibre of the systemic vessels and easing the left heart, they at the same time, by widening the pulmonary vessels, relieve the strain on the right heart. Since paroxysmal cardiac dyspnœa has many causes, some of which are not influenced at all by vascular dilatation, it follows that sometimes no relief is obtained from nitrites, but as a routine remedy for this dyspnœa I believe there is nothing better. For the past two or three years nitrites have been resorted to habitually in my wards of the infirmary at Manchester in all forms of dyspnœa. Comparing their effects with those obtained from ether and ammonia in paroxysmal attacks of cardiac dyspnœa, I have no hesitation in saying that the nitrites are by far the most beneficial. I have used a solution of nitrite of ethyl in absolute alcohol, but nitro-glycerine or nitrite of sodium with alcohol might, perhaps, in some respects be better, since they are more stable. For the permanent short-breathedness of cardiac disease the nitrites are, I believe, less useful than for dyspnœic attacks. Occasionally a measure of relief may be given to the heart's work by them which is doubtless beneficial to this organ, but I do not think that it is possible to keep the tension permanently low, either by nitrites or by nitro-glycerine, for by persistent administration at short intervals their vascular dilating power lessens somewhat and with large continuous doses methæmoglobin might be produced. I have found that some patients with weak dilated hearts, who suffer from dyspnœa on slight exertion, experience great relief from a few small doses daily of nitro-glycerine, and I think I have seen some permanent advantage derived from this treatment. In some other special conditions connected with cardiac disease the nitrites have been found to be of service—as, for example, in aortic insufficiency with hypertrophy and severe headache.

We often meet with patients just past the middle period of life who are stout and with some evidence of fatty cardiac change, who feel a sense of discomfort on any exertion and are therefore unable to take exercise, and who at times have somewhat severe attacks of dyspnœa from slight causes. In these cases I think the nitrites are not only useful in the attacks, but also in giving comfort when taken regularly. A tablet or two of nitro-glycerine, when taken twice daily, will often remove long-standing discomforts due to the readiness with which dyspnœa is excited, and a permanent improvement at times ensues, because, with the aid of the nitro-glycerine, patients are able to take a certain amount of exercise. Even in advanced fatty changes I have no hesitation in giving small doses of the nitrites, both to relieve and prevent dyspnœa. I question whether the heart in this condition is weakened by them at all; of this I am quite sure—it is much relieved and aided in its work.

SYNCOPE AND CARDIAC FAILURE.

A difficult question to decide is whether nitrites should be used in syncope and cardiac failure. The flushed face produced by amyl nitrite led to the idea that it might be of service in syncope, for which purpose indeed it was proposed, in the first paper on its action, by Dr. Guthrie in 1859. In 1871 Dr. Goodhart again suggested its use in sudden failure of the heart's action, and in the same year Dr. Talfourd Jones gave it with apparent advantage to a patient who had fainted. Since this time it has often been recommended and given in cases of apparent heart failure from various causes, including cardiac failure due to chloroform, and so far as I am aware no evil consequences have ever appeared to result from its employment; on the contrary, distinct and immediate improvement in the patient's condition is said to have followed its use. Nitro-glycerine, too, has been given in syncope and collapse, and in one case of collapse during the passage of gall-stones, and when the patient was pulseless, it is recorded that ten drops of a 1 per cent. solution of nitro-glycerine were injected with advantage. Dr. Reichert especially has claimed the nitrites as valuable cardiac stimulants and in support of his contention has marshalled a series of cases of heart failure in which they had seemed to prove useful. As I have indicated when speaking of the pharmacology of the nitrites, there is ground for thinking that the initial influence of small doses of nitrites on the circulation is a stimulant one, notwithstanding that they are so capable in large doses of weakening the heart's action. Syncope is the result of a failure of the heart to supply the cerebrum with a due amount of blood, and to this failure arterial dilatation and lowered tension sometimes contribute. When this is the case it would appear that the administration of nitrites might be gravely dangerous, since they so powerfully lower tension; but spasmodic contraction of the arterial vessels is probably in some cases one cause of the insufficient supply of blood which leads to syncope, and here, for increasing the cerebral supply, nitrites would be of service. When, too, sufficient blood is not driven into the brain, owing to deficient power in the heart itself, nitrites may be useful by their direct influence on this organ, and indirectly by dilating the vessels and thus relieving the heart of some portion of its work. Whilst then in some forms of syncope harm might be done, and even a fatal result might be brought about by full doses of nitrites, it seems to be very probable that in others good results will follow from their employment; and since no bad effect has yet been recorded from the use of nitrites in syncope, whilst in many cases great advantages have followed their use, the employment of small doses of nitrites in syncopal conditions seems to be well justified. In cardiac failure, too, there is evidence that good results have followed both from the use of amyl nitrite and nitro-glycerine, and it seems to me that these are grounds for the use of the drugs in small quantities. A failing heart will under their influence beat more quickly and will be relieved of a certain portion of its work by the dilatation of the vessels; but the difficulty is to graduate the amount of nitrite to the necessities of the heart. If any nitrite were by inhalation thrown into the blood in large quantities it might stop the action of a failing heart.

PULMONARY DYSPNŒA.

For the relief of dyspnœa due to asthma and bronchitis the nitrites and nitro-glycerine have been occasionally used since Dr. Talfourd Jones in 1871 recorded the beneficial effects of the inhalation of amyl nitrite during an asthmatic paroxysm. Five years ago Professor Fraser published the results of his investigations on the influence of the nitrites of amyl, ethyl and sodium in the dyspnœa connected with asthma and bronchitis.[3] He found that in asthmatic paroxysms the inhalation of these nitrites was capable of completely relieving the respiration and removing the adventitious lung sounds. Usually the rhonchi returned when the effect of the nitrites had passed away; but at times the relief was permanent. With the nitrites of ethyl, sodium and nitro-glycerine he generally noted in half a minute a decrease of the adventitious sounds and lessened dyspnœa, and relief in from three to five minutes. As might have been expected, the effects were more prolonged than after nitrite of amyl. In sixty-one observations made on twenty-five patients suffering from bronchitis, in some cases accompanied with dyspnœic paroxysms, the nitrite in forty-eight removed every vestige of rhonchus or sibilus for various periods of time; in ten the sounds were lessened, but they were not altogether silenced; and in three the effects were slight or negative, and in these the dyspnœa was not relieved. I cannot say that my experience of the use of nitrites in asthma and bronchitis has been as favourable as that recorded by Professor Fraser; nevertheless, I have seen a large measure of relief afforded in pulmonary dyspnœa by them. In typical asthma I have often seen complete and rapid relief afforded, yet in some cases hardly the slightest benefit arises either from inhalation of amyl nitrite or from the administration of large doses of the other nitrites. In the less severe asthmatic attacks, which are apt to come on from time to time in nervous people subject to slight bronchitis, the attack is almost always cut short by nitrites; and where marked bronchitic symptoms are permanently present and asthmatic exacerbations also occur the nitrites give relief to the urgent dyspnœa in a large proportion of the cases, yet by no means in all. The disappearance of the rhonchi in bronchitis under the influence of the nitrites I have often seen, but it does not in my experience occur so frequently as in the cases observed by Professor Fraser. Where abundant moist sounds are present owing to a large amount of secretion in the bronchial tubes, the nitrites generally are of little service; but in dyspnœa with bronchitis, indicated by abundant sibilant and sonorous rhonchi, and also in asthmatic paroxysms, amelioration is at least the rule. At times paroxysmal dyspnœa is cut short by a single dose of one of the nitrites and may not recur for hours. In bronchitic dyspnœa the duration of the relief varies, but usually lasts as long as the influence on the circulation. From this Professor Fraser thinks that the nitrites produce their effect by relaxing the muscles of the bronchial tubes in the same manner as they relax the contraction of the bloodvessels, and that this effect is the essential cause of the relief nitrites give in dyspnœa. From the marked effect of nitrites in some cases of asthma and bronchitis, and from the evidence we have of the influence which nitrites exert on involuntary muscle fibre, it certainly seems to be probable that they are capable of increasing the lumen of bronchial tubes when narrowed by the contraction of the muscular fibre which surrounds them; but it by no means follows that such contraction is the sole cause of asthmatic paroxysms or of the exacerbations of dyspnœa in bronchitis. There is a want of uniformity in the action of nitrites which I should hardly expect if paroxysmal dyspnœa depended entirely upon the contraction of the bronchial muscles alone; moreover, dyspnœic attacks are at times relieved by nitrites without any marked alteration in the auscultatory signs. It seems to me to be likely that some alteration takes place in the bronchial mucous membrane more or less coincident with spasmodic contraction of the bronchial muscles.

Sir Andrew Clark has suggested as a cause of asthmatic paroxysms a sudden hyperæmic swelling of the mucous membrane of the bronchial tubes comparable to the changes which occur in the skin in urticaria. Professor Fraser is of opinion that the relief afforded by the nitrites in asthma is opposed to such a theory, because the dilating action on the vessels which he supposes occurs in the bronchi, as in all the other vessels of the body, would increase or prolong the paroxysms instead of controlling or checking them. With this view I cannot coincide, for if the tumidity of the mucous membrane connected with asthmatic attacks resembles that which occurs in urticaria it is probable that it is associated with spasm; at least, in urticaria antecedent spasm is held to be probable. It is not likely that vascular dilatation would be present at any one time over the whole mucous membrane affected; it

[3] Transactions of the Edinburgh Medical and Chirurgical Society, vol. vi.

is more probable that spasm and dilatation would coexist in different portions of the mucous membrane. Such a condition the administration of nitrites would tend to relieve and by decreasing spasm they would help to restore the mucous membrane to its normal condition. It is just possible, too, that the dilating influence exerted on the pulmonary vessels by the nitrites may to some extent relieve the bronchial vessels. As a rule nitrites are well borne by dyspnœic patients and large doses may be safely given if experience shows that they are needed. I have administered one drachm of a 2½ per cent. of ethyl nitrite solution every ten minutes until three or four drachms have been taken. Sodium nitrite is at times borne better in pulmonary dyspnœa than ethyl nitrite and sometimes the reverse is the case. The spiritus ætheris nitrosi of the Pharmacopœia would be equally serviceable if it always contained a definite amount of the ethereal nitrite, but the rapid deterioration in the strength of this ingredient, which at times takes place, renders it uncertain in its influence. Perhaps the best preparation would be liquor trinitrini combined with a small quantity of rectified spirit. Headache, however, seems to me to be more common after trinitrine than after nitrites. Of late I have used ethyl nitrate in doses of from five to ten minims and find that it is quite as efficacious as ethyl nitrite and that its influence lasts longer. Amyl nitrite acts for too short a time to be of service. The nitrites must not be regarded as curative agents in bronchitis. They are often capable of relieving dyspnœa, and by dilating the vessels of the lung they may possibly temporarily relieve the right heart; but in the ordinary forms of bronchitis their regular administration does not, as a rule, prove to be very advantageous. It is for the relief of dyspnœic conditions that they should be reserved, and even then they often fail when abundant moist sounds indicate that the difficulty of breathing is connected with accumulation of bronchial mucus rather than with spasm of the tubes or vessels. By some the nitrites have been used in pneumonia, lung œdema and many other lung ailments. It is quite possible that they may give relief at times, but I question whether they can be looked upon as being curative.

URÆMIC DYSPNŒA.

In uræmic dyspnœa I have been at times disappointed in the use of nitrites. Scattered through the journals are many records of the utility both of nitro-glycerine and of amyl nitrite in this condition. I also have found them to be advantageous, yet they have often failed. They are indeed well borne in large doses, but the relief they give is usually transient. Perhaps it may be that uræmic dyspnœa owns another cause besides those which are the chief factors in cardiac and pulmonary lesions. M. Huchard is of opinion that even in that altered condition of the arterial walls which often so long precedes renal disease (and which may indeed terminate life by the cardiac troubles it induces, apart from renal disease) toxic products may accumulate in the blood, because the kidney is unable from the changes in its vessels to eliminate them. He adduces in support of his views the non-toxic effect of the urine in these cases, and he looks on the dyspnœa which occurs as the result of the reaction on the body of toxines which would have been eliminated had the kidney been perfectly healthy. In Bright's disease this toxic material must often be present, and it seems to be possible that in some cases it may exert its influence so strongly as to neutralise the effects of the nitrite molecule, as I have shown that barium neutralises it outside the body. There must be great variations in the amount of toxic material present at various times, and it may be that this variation accounts for the different effects produced by nitrites under apparently the same conditions. Nitrites and nitro-glycerine cannot be relied upon to combat the high tension which is often present long before renal disease presents itself. They act quickly, but not continuously, for they are easily eliminated. There is reason to believe, too, that the tissues become accustomed to them if they are given frequently and are thus less influenced by them; hence I believe that their frequent administration is not desirable in this condition, which, as M. Huchard and others have pointed out, should be met by the patient being placed on a milk diet and by the administration of eliminants. To relieve, however, some of the discomforts arising from high tension—such as headache, heaviness and dyspnœa—the administration of liquor trinitrini or the nitrites is often of great service, and in the dyspnœic paroxysms which accompany the heightened tension from arterial changes when cardiac dilatation has commenced these drugs are of the greatest value if they are given in sufficient doses. Let me lay stress on the word "sufficient." The doses in these cases must usually be large and an amount which will dilate the vessels ordinarily very fully may have too slight an effect to be of service in chronic Bright's disease; yet even in this ailment full doses may at times produce alarming symptoms, and even moderate amounts may give rise to discomforts. It is never wise to commence the administration of nitrites and nitro-glycerine with large doses.

CHEYNE-STOKES RESPIRATION.

Dr. Filehne many years ago noticed that the inhalation of amyl nitrite removed the Cheyne-Stokes respiration and he attributed this result to its effect on the vaso-motor mechanism. Dr. Gibson, however, finds that though it has this effect in some cases, owing, he thinks, to its stimulating effect on the central nervous structures, it produced no influence in others.[4]

MIGRAINE AND HEADACHE.

For the relief of headache, the nitrite and nitro-glycerine have been much employed and considerable success has been recorded from their use. Amyl nitrite has been specially credited with the power of relieving migraine and sometimes with curing it. That it will at times cut short an attack no one who has used it extensively, as I have done, can doubt, but in my hands its failures have far outnumbered its successes. Even if, as has been suggested, the immediate cause of suffering in some forms of migraine is connected with local vascular contraction, it is not likely that a very temporary dilatation of the vessels could be relied upon to restore a normal condition. We know, however, how suddenly tension may fall, and inhalation of amyl nitrite coming at the right time may be the final cause of relief, the dilatation which it causes not being followed by contraction; but perhaps, as Pick long ago suggested, it is sometimes probably a kind of "surprised influence," which immediately takes away the pain when nitrite of amyl is inhaled, just as any other influence, physical or mental, may have the same effect. It not unfrequently happens that after amyl nitrite-inhalation has succeeded once or twice it subsequently quite fails to give relief. The drug, indeed, has not maintained its promise; the utility attributed to it in the account of earlier reporters has not been borne out by frequent experience. It does not seem to be likely that nitrite of amyl can permanently cure migraine. Nitrite of amyl has been used to combat slight forms of headache, and here, too, it is sometimes successful in giving relief; but as it at times greatly intensifies the pain its general employment has fallen into disrepute. Nitro-glycerine is probably a far more effective remedy than amyl nitrite. Dr. Hammond and many others have borne strong testimony to its utility in migraine. It is naturally most useful in those attacks in which the face is pale and the radial artery tense. I have sometimes seen the administration of a drop or two of nitro-glycerine in these conditions give rapid and enduring relief, yet this effect is by no means always to be seen, and in neurotic patients and those with low tension and an easily excited circulation discomforts may be considerably aggravated. I believe, however, that nitro-glycerine might with advantage be more frequently used for the relief of migraine and headache generally if care were taken to employ it only where the circulatory conditions point to some degree of high tension. That migraine and other forms of headache have permanently disappeared under its use I do not doubt, but it is by no means so certain that this effect has followed because of their use. The dose of nitro-glycerine given for the relief of headache should always be in the first place small. Even a single drop, if the case be not suitable, may prove very unpleasant to the patient. It is sufficient in doubtful cases, at least, to commence with half a drop of liquor trinitrini. If slight relief or no relief ensues in half an hour a drop may be given; and later, if necessary, larger doses should be administered.

[4] Practitioner, vol. xxxviii., p. 86

BIDEFORD URBAN SANITARY AUTHORITY.—The following resolution was unanimously passed at a meeting of the Bideford Urban Sanitary Authority held on June 29th: "That the thanks of the board be given to Dr. Ackland for his diligent and faithful services (twenty-two years) as medical officer of health of this borough, accompanied by an expression of regret at his resignation."

NEUROLOGICAL FRAGMENTS.

BY J. HUGHLINGS JACKSON, M.D. ST. AND., F.R.S.,
PHYSICIAN TO THE HOSPITAL FOR THE PARALYSED AND EPILEPTIC.

No. I.

TWO CASES OF OPHTHALMOPLEGIA EXTERNA WITH PARESIS OF THE ORBICULARIS PALPEBRARUM (ILLUSTRATION OF MENDEL'S HYPOTHESIS).

HAVING regard to certain researches of Mendel brought into prominence in this country by Dr. Tooth and Dr. Aldren Turner (*vide infra*) I thought it likely that in cases of ophthalmoplegia externa there would be some degree of paralysis of the orbicularis palpebrarum, as indeed these physicians predicted. I looked for and found weakness of this muscle on both sides in two cases of paralysis of the external muscles of the eyeballs. One of the two cases was that of a patient under the care of Dr. Ferrier, to whom I am indebted for permission to record the observation I made. Mendel's suggestion is that fibres to the orbicularis palpebrarum, although they come out by the seventh (portio dura) nerve, do not arise from the seventh nucleus, but from the nucleus of the third nerve. The two cases mentioned give, from the clinical side, great support to Mendel's hypothesis. I here refer to an article by Dr. Howard Tooth and Dr. Aldren Turner,[1] and also to one[2] by Dr. Aldren Turner. To both these contributions I am very greatly indebted. I quote two paragraphs from the paper in *Brain*, which is a report by Dr. Tooth and Dr. Turner of a case of bulbar paralysis, with post-mortem examination, and with an elaborate microscopical examination of the nervous centres.

"*Relation of facial nerve to seventh nucleus.*—We are enabled by the microscopical examination of this case to produce anatomical evidence of the possible innervation of the orbicularis palpebrarum by the oculo-motor nuclei. As above described, the oculo-motor nuclei (third and sixth, fourth not examined) are quite healthy, whilst the seventh nucleus and the ascending loop of the nerve lying dorsally to the posterior longitudinal bundles are deeply degenerated. Now it is probable that this ascending limb includes all the fibres from the nucleus proper; but the nerve root, on the other hand, passing through the medulla to issue from the side as the seventh nerve, though not presenting the size and compactness of the normal root, yet contains many perfectly normal fibres. We must suppose that these have come from some other source than the highly degenerated nucleus, and we believe that they come from the oculo-motor nuclei by way of the posterior longitudinal bundles, and are passing in the trunk of the facial nerve to supply the unaffected muscles of the upper face, or, as we may call them, the oculo-facial group (frontalis, corrugator supercilii and orbicularis palpebrarum)."[3]

"In support of this view we refer to a suggestive paper by Mendel,[4] who performed experiments after Gudden's method on rabbits and guinea-pigs. The upper and lower eyelids were stitched together and the frontalis extirpated in newborn animals. After six to ten months they were killed. Careful examination of the abducens and of the seventh nuclei failed to show any change in them. The facial trunk on the side operated on appeared thinner than on the other side. Marked changes were found in the hinder parts of the third nucleus—namely, greater diminution in the number of the ganglion cells, so as to cause the nucleus as a whole to be much smaller on the same than on the opposite side. The cells were atrophied and their protoplasm stained less vigorously than normal. He suggests that the path of connexion between the oculo-motor nuclei and the facial nerve is the posterior longitudinal bundle."

In the paper in the Royal London Ophthalmic Hospital Reports, vol. xiii. p. 328, entitled "The Diagnostic Value of the Loss of the Pupillary Light Reaction, with a Note on the Oculo-facial Muscular Group," Dr. Aldren Turner deals with the matter again. He considers the clinical and experimental evidence, and adduces anatomical data from the case he and Dr. Tooth recorded in *Brain*. This paper is a very valuable contribution to neurology. The following is Dr. Turner's concluding paragraph: "The view that the oculo-facial group of muscles is innervated from the oculo-motor nucleus, originally advanced by Mendel from experimental facts alone, therefore receives corroboration both from clinical and anatomical data." Both the papers I have quoted from were the subject of a leading article in THE LANCET of April 1st.[5]

In the patient under the care of Dr. Ferrier there is wider paralysis—to be mentioned in a subsequent note—than I have indicated, but there is no such complication as invalidates the bearing of the case on Mendel's hypothesis. I am now dealing with but one point—the state of the orbicularis palpebrarum. I am very much indebted to Dr. Wood for aid in this investigation. To superficial observation the patient can shut both eyes efficiently; but he told us that on the firmest closure he saw light between the lids and volunteered the remark that soap got into his eyes whilst he was washing his face. Moreover, when he shuts his eyes as strongly as he can we have not the slightest difficulty in opening them against all the resistance he can make. Clearly in this case of ophthalmoplegia externa there is some degree of paralysis of the orbicularee palpebrarum.

There was recently under my care in the London Hospital a patient, J. C——, aged thirty-four, who had ophthalmoplegia externa, kindly transferred to me by my colleague, Dr. Frederick J. Smith. It is the case mentioned by this physician in a letter published in THE LANCET of April 8th.[6] The patient is now under my care in the Hospital for the Paralysed and Epileptic, Queen-square. (I am greatly indebted to Dr. Hawkes, house physician at the London Hospital, and to Dr. Wood, house physician at the Hospital for the Paralysed and Epileptic, Queen-square, for help in the investigation of this case.) Here the paralysis of the orbiculares palpebrarum is not so great as in Dr. Ferrier's patient. The patient can see nothing between his lids when he shuts his eyes and soap does not get in when he washes his face; but that the orbicular muscles are weak is clear from the ease with which we can separate his eyelids with our fingers against his greatest efforts to keep his eyes shut. Mr. Waren Tay corroborated this observation. Contrasts with healthy persons were of course made. The patient can shut one eye at a time. Mr. Marcus Gunn examined his eyes on June 6th. There was then marked drooping of both upper eyelids, leaving narrowed and equal palpebral apertures. On being told to open his eyes there was a slightly increased action of the occipito-frontalis, a muscle constantly in action in this patient. Both eyeballs moved to a very slight extent and equally on his attempting to look to the sides and downwards; there seemed to be no movement upward beyond the horizontal. The right pupil was 6·5 mm., the left about 5·75 mm.; the pupils acted to light and with attempts at accommodation. There was entire absence of power of convergence. The pupils became smaller on attempts to look upwards and dilated on looking downwards. This was confirmed at a subsequent observation by Mr. Gunn, Dr. Wood and myself. On being told to shut his eyes tightly both were quite closed and the skin of the lids was thrown into wrinkles, the left being apparently less firmly closed than the right. On endeavouring to overcome the resistance of the orbiculares palpebrarum with the finger both were found to be rather feeble, the left being the more so. At my suggestion cocaine was dropped into one eye. Its action on the pupil was marked, but Mr. Gunn observed no widening of the ocular aperture after forty-five minutes nor did Dr. Wood several hours later. Dr. Wood made two other examinations with like results. I defer making any remarks on the action of cocaine in the case of this patient. One reason for doing so is that about six weeks before the observations made by Dr. Wood cocaine did, as Dr. Hawkes and I witnessed, produce widening of the aperture of the eye into which it was dropped. It is to be observed that, in one examination made by Dr. Hawkes, there was dilatation of the pupil of the cocainised eye without widening of the ocular aperture until after the lapse of some time; the widening was noticed an hour and a half after the instillation. I am indebted to Dr. Wood for the following electrical examination of the patient. "On faradaising the orbicularis palpebrarum there was found to be less response in this muscle than there is in that of a normal person. Several healthy persons, including myself and Dr. Willis, were tested, and a very distinct difference

[1] Brain, part lvi., Winter Number, 1891.
[2] Royal London Ophthalmic Hospital Reports, vol. xiii., part 3.
[3] Study of a case of Bulbar Paralysis, with Notes on the Origin of Certain Cranial Nerves. Brain, vol. xiv., p. 437.
[4] Ueber den Kernursprung des Augen-Facialis: Neurologisches Centralblatt, 1887, p. 537. Mendel refers to a discussion on the subject in the Berliner Klinische Wochenschrift, 1887, No. 48.
[5] Oculo-motor Symptoms in Organic Nerve Disease.
[6] Oculo-motor Symptoms in Organic Nerve Disease.

could be demonstrated. It was possible to obtain, by using a weak faradaic current, no reaction in the patient's orbicularis palpebrarum, whilst the same current caused a distinct contraction in that of a healthy person; the patient's orbicularis oris reacted to a current which would not contract his orbicularis palpebrarum. On using the galvanic current it was found that there was no changed polar reaction and that kathode closing contraction was in each case greater than anode closing contraction, but the contraction with the same current was not so good or so sharp as in that of a healthy person, although the same strength of current was used in both."

A slight degree of paralysis of the orbicularis palpebrarum may easily be overlooked. To refer to a very different kind of case from the two instanced, one may note differences in the degree of closure of the two eyes in one patient. In some cases of ordinary hemiplegia the patient can shut the eye on the paralysed side efficiently, although not so firmly as on the sound side. This is to be proved by the much greater ease with which one can open the eye on the side paralysed than one can the eye on the non-paralysed side against his resistance.

I will now merely allude to a few things having a general bearing on the application of Mendel's hypothesis. I suppose that it is the inner circle of the orbicularis palpebrarum which is, or is most, affected in the cases of ophthalmoplegia externa mentioned. We have, Fuchs tells us with regard to closure of the lids, to distinguish between moderate closure, such as takes place in winking and in sleep, and the process of screwing the lids tightly together. Duchenne says that the orbicularis palpebrarum is really composed of four muscles. Everybody knows of Darwin's researches on the action of the orbicularis palpebrarum during crying &c. No doubt this muscle is represented in several places in the central nervous system (lowest level), according as it takes a share in different movements (actions). I have often suggested that nervous centres represent movements, not muscles. It is suggested that one place for the representation of the orbicularis palpebrarum is that where the external ocular movements for directing the eyes for the estimation of distance are represented. Presumably the peering movements of a short-sighted person—movements helping him to see better—will be represented with certain movements of the eyeballs. Since writing the foregoing I have seen, with Mr. Couper, a patient the subject of ophthalmoplegia externa. The lateral movements of both eyes were nearly abolished and the upward and downward movements were much narrowed in range; there was ptosis on the left side. The pupils acted to light and during accommodation. In this case the orbiculares palpebrarum were weak; the one of the left side was the weaker. Mr. Couper examined these orbicular muscles carefully and agreed with me that they were decidedly weakened. Subsequently he examined J. C——, and agreed in the observations as to the weakness of the orbiculares palpebrarum.

Manchester-square, W.

GASTRO-ENTEROSTOMY:

BEING A MODIFICATION OF SENN'S METHOD.[1]

BY F. T. PAUL, F.R.C.S. ENG. &c.,

SURGEON TO THE LIVERPOOL ROYAL INFIRMARY.

SENN'S bone-plate method of performing the operation of gastro-enterostomy has been practised in the neighbourhood of Liverpool about six times, and three patients are known to have lived long enough after the operation to test its results. Mr. Stansfield's patient lived for four months, symptoms of pyloric obstruction recurring about eight weeks after the operation. A post-mortem examination was made and the new opening was found to be perfectly closed with the silk ligatures *in situ*. Mr. Larkin's case, so far as the opening is concerned, proved to be an exact counterpart of Mr. Stansfield's, and there was my case, in which the patient died about two months after the operation with the opening contracted to at least one-third of its original size. These being the only "successful" cases in this district, it is perhaps not to be wondered at that physicians are a little shy of encouraging the operation of gastro-enterostomy for pyloric cancer. The published records from other districts appear in some instances to be of a more hopeful nature; but prolonged relief is certainly the exception and not the rule, whilst the symptoms have in several cases pointed to a repetition of the Liverpool experience, though the result has not often been verified by post-mortem examination. In Senn's record of his original experiments there are only four examples of gastro-enterostomy. Of these one dog died from causes indirectly connected with the operation on the following day and another was killed on the seventh day. Hence the first two have little or no bearing upon the question of the permanency of the opening. The third was killed on the thirty-fourth day and the fistulous opening was found to be large enough to admit the index finger. The fourth was killed on the fourteenth day and the opening was entirely closed. Mr. Bowreman Jessett records two experiments in which he repeated Senn's operation, killing one dog three weeks and the other a month afterwards, with the result that water passed freely through the opening in each case, but the size of the opening is not stated. Senn's explanation of the cause of closure is that either the opening in the bone-plates was too small or the lateral sutures had been passed too near the edge of the cut, thus allowing its margins to approximate. But whether this simple explanation is correct or not, and it is at least doubtful, the fact remains that both in the original experiments and in the practice of several surgeons subsequently the opening has closed. At the same time it may be said to have been clearly shown that a fistulous communication between the stomach and bowel may be established, even in very debilitated subjects, without great risk to life, and this is an important point. Having once learnt the secret of a safe operation, it is surely only a matter of detail to secure an opening which will prove to be more permanent.

Cases in the human subject seem to show that the inosculation is at first quite satisfactory, that for some six or eight weeks it remains fairly free, and that then it slowly contracts, with the recurrence of symptoms of obstruction. This points to the character of the opening being in fault rather than the bone-plates or the suturing. It is a clean incision involving no loss of tissue, and clean incisions in the stomach tend to heal remarkably well. Probably the more food that passes through the new opening the better it is maintained, and that in cases of combined pylorectomy and gastro-enterostomy, like Mr. Rawdon's and Mr. Jessett's, it would always be permanent; but the obstruction offered by a pyloric cancer is diminished by the temporary relief which the operation affords, just as rectal stricture yields for a time after colotomy. No doubt at first food again passes by the pylorus, as we know that fæces pass again by the rectum when no "spur" has been made, and in either case the new opening is liable to shrink. It was in the belief that the cause of failure is to be found in the character of the opening that some further experiments, presently to be described, were undertaken. Another drawback to the present method of operating is the necessity of bringing the jejunum across the transverse colon to attach it to the front of the stomach. In my case this produced a condition of partial obstruction, which was very troublesome to the patient owing to the constant distension of the cæcum with gas. The difficulty has been met in two ways, neither of which is at all satisfactory. One is to tear through the transverse meso-colon and gastro-colic omentum and to bring the jejunum through this opening to the front of the stomach. The other is to turn the whole stomach up and to attach the intestine to the back instead of the front surface of it. The former plan has resulted in obstruction of the bowels through kinking, and the latter is a very difficult and sometimes impossible operation to perform in the presence of malignant disease.

The operation about to be described strangulates the connected surfaces of the stomach and intestine, effecting by sloughing a clean circular opening between the bowel and the back of the stomach, which in experiments on dogs has shown no tendency to diminish up to a period of 107 days, the longest experiment made. The special apparatus required involves nothing more than a hard ring, preferably of bone, about three-quarters of an inch in diameter for human intestine and perforated with four small equidistant holes. The ring may be rounded on all sides or only on one, as in the diagram (Fig. 1). This surface should always be round in order that it may not cut the piece out too sharply and lessen the breadth of surrounding adhesions. The four holes are charged each with a needle carrying a strong double silk

[1] Abstract of a paper read at the Liverpool Medical Institution.

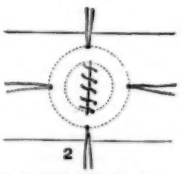
thread, very securely double knotted on the under side. For dogs rings of half an inch in diameter were used and the ligatures were generally tied over a second ring, though this was subsequently found to be unnecessary.

The operation is performed as follows: The abdomen is opened and the first part of the jejunum is found and brought out of the wound in the usual way. A small incision is made into the bowel, where it can be applied to the lower and back part of the stomach without the least tension. Through this small wound the bone ring is slipped into the bowel, the needles are passed as in Fig. 2 and the opening is temporarily

FIG. 1.

1 The bone ring charged with silk sutures and needles.

FIG. 2.



2 Bowel with ring and sutures *in situ* and opening temporarily closed.

closed. Next a cut of about an inch and a quarter in length is made in the front wall of the stomach opposite to the spot where the inosculation is desired, and the four needles are passed in regular order through the transverse meso-colon and posterior wall of the stomach and are brought out of the front opening (Fig. 3). When they are drawn tight of course the intestine is firmly applied to the back of the stomach, and by cutting off the needles and tying the ligatures tightly, as in

FIG. 3.

3 Sutures passed on through the posterior wall of stomach and brought out of anterior opening.

FIG. 4.

4 Sutures tied and portion marked A strangulated.

Fig. 4, the included discs of bowel and stomach are strangulated between the ring in the former and the ligatures in the latter. Whilst the parts are still held forwards by the ligatures the centre of this area may be cut out with a tenotomy knife, thus at once effecting a communication between the two viscera. Then the ligatures are cut short, the parts are allowed to drop back into position, and the opening in the front wall of the stomach is closed by a double row of fine green catgut sutures, by a continuous row in the mucous membrane, and by Lembert sutures in the outer coats. Finally the stomach is turned up if possible, and a few Lembert sutures are applied on the outskirts of the inosculation to retain the parts in position when they lose the support of the ligatures by sloughing on the second day. These sutures are much more important in this than in Senn's operation; but if they cannot be used owing to fixation of the organ by cancerous infiltration—and it must be a very bad case in which none can be passed—the patient must be kept very still for at least a week. Such additional support is less urgently needed when the intestine is applied to the back than when it is applied to the front of the stomach, as the tension in the former case is much less; but it should never be neglected. The abdominal wound is always closed with deep sutures of fishing gut including all the tissues from the peritoneum to the skin.

The experiments were all performed upon mongrel terriers about the size of an ordinary fox terrier, and the part of the bowel used was the coil which happened at the time to be lying nearest to the lower and posterior part of the middle of the stomach.

Experiment 1.—In this case two rings were used, one in the intestine and the other in the stomach. No Lembert sutures were applied round the inosculation. The animal suffered very little from the operation, taking its food well all the time. It was kept on bread-and-milk for about a week, and subsequently on ordinary diet. The bone rings, slightly digested, were passed on the fourth day in the second motion after the operation. The animal was killed on the thirty-first day, when the opening was found to be circular and free, but its size was not estimated until after the parts had been hardened in strong spirit, when it measured only one-third of an inch in diameter. The incision in the front of the stomach could hardly be detected and there were scarcely any adhesions except those concerned in the gastro-enterostomy itself.

Experiment 2.—The proceedings here were reversed, the first ring being inserted into the stomach and the ligatures tied over a second ring in the duodenum through an opening on its opposite side. There was some tension on the bowel, but no supporting Lembert sutures were put in. The dog did very well for twenty-four hours, but then seemed to be rather uneasy and on the following morning was found to be dead. An examination showed that the heavy duodenum—it is very thick in the dog—had partly broken through the fresh adhesions round the slough and had permitted a fatal extravasation. Until this case occurred the outer edge of the ring on the side next the viscera had not been rounded off nor had the surrounding Lembert sutures been used. Afterwards both modifications were adopted, but the operation was not repeated on the front of the stomach, as everything was more favourable for the opposite position.

Experiment 3.—The operation was performed as in the first case, but with the precautions suggested by the second. The dog did well throughout and was not killed until the one hundred and seventh day. He had increased in weight. The opening was found to have been made between the back part of the stomach near the pylorus and the commencement of the colon. It readily admitted a half-inch test-tube, thus showing that in this long period it had undergone no contraction. This case is particularly valuable because it is almost certain that the opening must have been quite functionless and still did not contract. Had food passed through it into the colon nutrition would have suffered, and had fæces escaped by it into the stomach vomiting, as was shown by a subsequent case, would have occurred.

Experiment 4.—The steps of the operation were the same as those of the last experiment. The animal was stronger than any of the others at first; it passed the rings on the fourth day. After about a week it suddenly began to throw up yellow vomit, and later fæcal vomiting became so severe that it was thought advisable to have the dog killed on the twenty-second day. On examination a full-sized opening was found (five-eighths-of-an-inch rings were used) between the back of the middle of the stomach and the small intestine rather less than half-way down. The mucous membrane of the stomach was a good deal congested. Evidently fæcal matter had poured freely through the new opening into the stomach, whilst food had apparently left chiefly by the pyloric orifice. It is unnecessary to point out that this course of events could not occur when the upper part of the intestine was selected or when the pylorus was strictured.

Experiment 5.—The operation was similar to the last experiment, but only one ring was used, the ligatures being tied in the stomach on the bare mucous membrane. The ring was carefully looked for but could not be found, so it was probably digested. The animal made an excellent recovery, except for a short attack of fæcal vomiting, but accidentally swallowed some poison in the toxicological laboratory and had to be killed on the twenty-fourth day. At the post-mortem examination the same clean circular opening was found measuring a full half inch in diameter and at about the same position of the parts as in the last case.

It is suggested that the following conclusions are justified by the experiments just related: (1) That the operation of gastro-enterostomy when performed in this way with due precautions is not more dangerous to life than with the decalcified bone-plates; (2) that the new opening is in a better position; (3) that it will not spontaneously close; and (4) that it involves no unnatural displacement of the bowel in bringing it into contact with the stomach. It is not claimed for this

proceeding that it is anything more than a modification of Senn's operation, and the idea of working through an accessory opening was obtained from Dr. Maunsell's paper on Resection of the Intestine, published in the Transactions of the Intercolonial Medical Congress of Australia for 1889.

Should experience in the human subject show this to be a more dangerous proceeding than Senn's it might still be utilised as a method of attaching the intestine to the back of the stomach by means of his decalcified bone-plates—a difficult and often impossible process to accomplish with safety by his method of operating. It having been suggested that the results would have been more reliable had the pylorus been obstructed at the same time, a further experiment has since been undertaken (May 17th). In this the duodenum was first almost entirely occluded by excising a crescentic portion and then the intestine just below was attached to the back of the pyloric end of the stomach. At first the dog suffered severely from this double operation, but after about ten days it began to improve and is now doing well and is increasing in weight, though all food has certainly to pass by the new opening. In July this animal unfortunately was lost, it being at the time in excellent health.

Rodney-street, Liverpool.

ONE OF THE BEST APPLICATIONS OF IODOFORM IN SURGERY.

BY W. ARBUTHNOT LANE, M.S. LOND., F.R.C.S. ENG.,
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IN erasing tuberculous joints where the bone entering into their formation contained cavities, often of very considerable size I have used iodoform very largely, not so much with a view of inhibiting the growth of organisms in the synovial cavity, but as a firm packing to occupy the cavity in the bone which would otherwise be filled with blood, and would form a very formidable nidus for the growth of tubercle bacilli. In such a joint as the knee or ankle-joint, where every particle of synovial membrane can be thoroughly and effectually removed, there is, in my experience, not the slightest chance of recurrence, for the reason that the retention of a drainage-tube for forty-eight hours with firm pressure ensures the accurate apposition of living tissues, all blood and other effusions having been driven out through the tube by the pressure of a flannel bandage, firmly applied. Where, however, a large cavity has been left in a bone no amount of external pressure can influence it, and it must of necessity remain filled with blood and be a source of danger to the individual. Such a cavity I treat in the following way and up to the present I have never known it to fail. An Esmarch's bandage being applied above the joint to control the circulation, the joint is erased and any cavity in the bone is thoroughly cleared out and the hole carefully dried with sponges. Some iodoform is then washed with 1 in 20 carbolic lotion and poured on to a piece of lint and squeezed as dry as possible. It is then introduced in masses into the cavity in the bone and stamped firmly in, much as a dentist fixes a gold stopping in a carious tooth, and when the cavity has been completely filled the surface of iodoform is planed down level with the surrounding bone. I will illustrate this mode of treatment by two examples.

CASE 1.—This was a knee-joint in which there was a large collection of tuberculous material between the front of the lower end of the femur and the synovial membrane of the joint above the limits of which it extended. It projected forwards so much that the joint presented the appearance of a typical tuberculous synovitis, for which I naturally mistook it. Finding the synovial cavity healthy I sewed up the incision into it and made one inside the limit of the synovial membrane and cleared out the whole of the tuberculous material on the part of the shaft. I then found a small aperture in the front of the bone in the position of the growing line, and, on enlarging this opening, I found it led into a carious cavity, which comprised almost every bit of both condyles of the femur, but in no place had it extended through the articular cartilage, though in parts it alone formed the circumference of the cavity. This cavity was cleared out most thoroughly in the manner described and was plugged with what seemed a very large quantity of washed iodoform. It is now a couple of years since the operation, and the girl possesses a movable knee-joint, which, with the exception of the scar left by the incision, appears as normal and performs its functions quite as well as its fellow. I cannot help feeling curious as to how much of the iodoform has been removed and replaced by bone, and how much, if any, still constitutes a portion of her osseous skeleton. I may say that when her knee was operated on an extensive tuberculous periostitis in her pterygoid fossa and its vicinity was cleared out as effectually as possible and the abscess cavity was filled with glycerine and iodoform. This, though improved by the operation, continued to discharge till quite recently.

CASE 2.—This was a case of tuberculous disease of the ankle-joint, which I operated on some months ago by a method which I described in a paper read last year before the Clinical Society and entitled "A New Operation by means of which the Ankle-joint can be thoroughly and perfectly erased." I may add that since writing that paper I have found it is unnecessary to divide the tendo Achillis, the division of the extensors and peronei being sufficient to allow of a perfect erasion. The division of this tendon also is, however, a matter of no moment whatever. In this case the subastragaloid joint was free from disease, but the whole of the cartilage was destroyed on the opposing surfaces of the tibia and astragalus. The astragalus was so much destroyed that after removing the carious and softened bone little was left but a cavity whose wall was formed in great part directly by the articular cartilage covering the head, under-surface and malleolar facets and in part by the same tissue covered by a thin layer of bone. Elsewhere the remainder of the wall of the cavity was formed by a thin shell of bone. When this cavity was packed with iodoform it was obvious that but a very small proportion of the astragalus consisted of bone, since it was practically an iodoform and not an osseous astragalus. The lower end of the tibia was deeply excavated in parts, and these spaces were plugged in a similar way. The patient made an uninterrupted recovery and is now at a convalescent home.

I might multiply examples of this treatment very largely, but the above accounts illustrate sufficiently well for my purpose the method I make use of. I would again point out that it differs altogether from the method which has been adopted for a long time of using iodoform in the form of an emulsion. I use the iodoform as a packing to occupy for a sufficient length of time, with a solid material which contains no organisms, and in which organisms cannot grow, a cavity which would otherwise contain blood in which micro-organisms might readily grow, especially if they were present in other parts of the body, (as in Case 1), this packing being gradually removed and replaced with bone.

St. Thomas's-street, S.E.

SCIRRHUS OF THE PANCREAS *VERSUS* SCIRRHUS OF THE LIVER.

BY CHARLES STEELE, M.D. DURH., F.R.C.S. ENG.,
LATE SENIOR SURGEON TO THE BRISTOL ROYAL INFIRMARY AND LATE LECTURER ON PHYSIOLOGY AT THE BRISTOL MEDICAL SCHOOL.

IT is an acknowledged fact that but few cases of scirrhus as affecting the pancreas are diagnosed during life, but are considered to be affections of the liver. As a matter of prognosis it may be a question of little moment, but as offering a means of relief by treatment I believe it to be of real value. The diagnosis is decidedly difficult and, especially if much tympanites is present, often cannot be cleared up until the fatal termination is approaching. I desire to state brief particulars of two decided cases affecting the pancreas and one affecting the liver and to contrast them, with remarks as to surgical treatment. I may mention that it has always been my habit to make post-mortem examinations in all cases of interest when I can obtain permission to do so; and I am sure that I have not had half a dozen refusals. During my early years of practice in Clifton Dr. Symonds employed me to make several necropsies in interesting or obscure cases, and showed his power of diagnosis in pointing out to me each spot, naming the morbid condition in each organ, before I touched the body; and these were verified as they were exposed. I well remember Dr. Henry Fripp's remark, made at a post-mortem examination on a case which he had seen in consultation and which we both had diagnosed to be scirrhus of the pylorus: "One case

well watched through its course and verified thus afterwards is of far more value to a practitioner than a great many cases in which diagnosis is not so confirmed." It was about this time that the following case came under my care.

CASE 1.—A tall, well-made man aged thirty-six, and of active, regular habits, consulted me for what appeared, both from the symptoms and a physical examination, to be tuberculous deposit in the upper lobe of the left lung under the clavicle. The disease advanced to the formation of cavities, but after a time improvement took place in the general condition and chest sounds and I considered that the cavities were cicatrising. I began to look forward to cretaceous bodies being expectorated and believed that I was curing a case of phthisis. The patient returned to his occupation and worked vigorously at it for some months. Then I saw him again, with evidence of torpid liver, which did not yield to treatment; but the yellowness of the conjunctiva was intensified. The skin became similarly affected and the appetite was poor. Then followed wasting, exhaustion and great feebleness. He had to keep to the house and then to his bed. The liver became large and tense, but felt perfectly smooth everywhere; the stools contained no bile but the urine was saturated with it. His whole surface was of the deepest yellow colour. My prognosis was that the case would terminate fatally, but I was in doubt as to the cause of the obstruction to the discharge of bile from the liver and consequently requested a consultation. A physician saw the patient with me and he came to the conclusion that the case was one of cancer of the liver and that it would end fatally, saying that he should like to be present at the post-mortem examination. After a month the man died. I obtained permission to make a post-mortem examination, and the physician to whom I have just alluded was present. The liver was of enormous size, being perfectly smooth, and the gall-bladder tense with bile of a very thick consistence, which also poured out freely from every section made in the liver, in which, however, there was not a single morbid deposit. On passing my hand into the abdomen I found a central mass the size of an infant's head, which proved to be the pancreas, totally altered in shape and scirrhous throughout. The lung mischief was in a quiescent state. The case left an indelible impression on my mind.

CASE 2.—About two years ago I was called to attend a man aged fifty-two, in advanced distress from similar intense jaundice, and who had only a few weeks to live. He had been told that he had cancer of the liver and that he would die before long. The case was clearly cancer; but I set myself to define whether it was of the liver or pancreas. There was much fulness at the lower part of the left lobe of the liver, and also great tympanites. This was reduced in a week and then I was able to draw down a firm, round pancreas with my right hand whilst I pressed up the left lobe of the liver with my left hand and could easily diagnose the disease to be scirrhus of the pancreas, but was disappointed by not being able to find the gall-bladder anywhere. The surface and consistence of the liver felt normal. On making an examination three weeks later I found the pancreas to be round, slightly lobulated on the edge, and very like a custard marrow, being a mass of scirrhus. The liver had one recent deposit on its upper surface and another in its texture near the fissure, whilst the gall-bladder was elongated to five inches, was full of bile and passed behind the right lobe of the liver and touched the eleventh rib.

The contrasting case of scirrhus of the liver which I have selected is the following:

CASE 3.—A lady aged seventy consulted me four years ago for general dyspeptic discomfort, which specially affected her right iliac region. I expressed a desire to examine her in bed, and on doing so a few days after found a firm tumour the size of a fist fixed at the upper edge of the sacro-iliac joint, but could not specify its nature and said that I wished to examine it at intervals. Her symptoms yielded to treatment; but some sense of weight and occasional pain remained in this part and the tumour did not alter. The urine, with the exception of the presence of lithates, was normal. Two years ago I attended her for very severe influenza with bronchitis and some pneumonia of the bases, from which she recovered. I examined the tumour then and for some months later, and it remained unaltered. In January, 1891, she sent for me because she felt very weak. I had not seen her for at least six months. Her feebleness was extreme. I recommended that she should go to bed. On examining the abdomen I found an enormous liver, smooth and hard, which had dragged downwards so as to reach the crest of the ilium; and this fact, together with tympanites and her prostrate state, precluded deep examination. I told her relatives that severe cancer had recently developed and that she could not live for more than two weeks. This opinion was confirmed by two other medical men. The patient had always been very taciturn, but she uncovered her right breast and said: "This may throw some light upon it; it has been so for eighteen years." The breast was entirely scirrhous, not fixed, showing no tendency to ulceration, and not affecting the axillary glands. Then I was told that five years previously she had been under medical care and that her attendant had found the iliac tumour and had desired a consultation, with the result that the consultant thought very seriously of it and gave her only a few months to live. The patient died. On making a post-mortem examination I found the liver, like the mamma, to be a mass of scirrhus of a dull-grey colour, with fine lines of normal tissue remaining; the gall-bladder was normal. On removing the liver I found the original tumour to be of the same size as during life, and that it was the right kidney with a moderate cyst on each side and a very large cyst at its lower extremity which was cupped into a concave depression by this large egg-shaped cyst, the weight of which had no doubt gradually dragged down the kidney until it could travel no further and became embedded. There were two small recent deposits of cancer in the kidney tissue, which otherwise was healthy and fulfilling its functions. The state of the liver in this case was identical with both the above instances of diseased pancreas; yet bile was passed and no appreciable jaundice had resulted, nor was there any bile in the urine. The streaks of normal liver tissue acted and the gall-bladder was able to empty itself.

In my experience scirrhous deposits in the liver do not affect the neighbourhood of the gall-bladder, and even when located close to it only gradually, and then not absolutely, obstruct it, whilst in scirrhus of the pancreas the pressure of the growth does entirely obstruct the common duct as if the thumb were pressed on an indiarubber tube; consequently, when a case is under consideration, if jaundice has progressed steadily to the extreme degree no bile is passed by stool and the urine is saturated with it, and neither gall-stones nor other cause can be defined; even though tympanites may prevent exact examination one may safely infer that the disease lies in the pancreas; and when one is able to map out and draw apart the edges of the organs one can settle the question during life. The intense distress—the feeling of illness, nausea, total anorexia, the itching of the skin &c.—is so characteristic that even whilst one knows that the patient cannot live long a means of relieving the misery and prolonging life for a little time may be suggested by cutting down to the gall-bladder, fixing it in the skin, opening it, and leaving it to empty itself and drain the system of much accumulated bile by a permanent sinus. This is the only operation which I propose, and I think that most sufferers would gladly consent to it. A considerable amount of comfort would follow, and I should have proposed it in my second case if I could have found the gall-bladder. In future I shall not fail to search for it behind and below the right lobe of the liver even to the tip of the eleventh rib, seeing that the enlarged pancreas can so tilt forward the liver as to make this bag of fluid gravitate in this direction. I proposed this operation some years ago in a case of extreme danger from impacted gall-stones, but further perseverance with remedies caused a slight exit of bile, which increased to restoration to health; but this was before Dr. Harley suggested his invaluable method of relief, and of course I should advise it for any extreme case where life was endangered by total prevention of the discharge of bile.

The following case has recently occurred in my practice and bears strongly on the surgical and diagnostic aspect of the case stated above.

CASE 4.—A lady aged forty-two, with good family history, had suffered from various illnesses for eight years: fatty accumulation on the heart, total deafness, sore-throat, chronic gastritis and other maladies, from which she thoroughly recovered. A year ago her heart's action was again extremely weak, for which condition she found brandy to be a necessity until I saw her and substituted meat essence and coffee. Her heart regained power and she resumed her active life, but moderate attacks of jaundice began, and though on several occasions they yielded to treatment she never absolutely became free from the yellow tint, and four months ago had a very severe attack of jaundice with extreme gastritis,

parched tongue, bleeding from the gums and loss of flesh The liver was enlarged and firm, but the gall-bladder could not be felt. She improved greatly during two months, but then became prostrate and was confined to bed, the jaundice increasing to an extreme degree. The urine was dark and for a short time it contained albumen; there were extreme sickness, great tympanites and steady emaciation. Some peritonitis occurred, together with fever and great tenderness of the abdomen, the latter being intensified over the liver and epigastrium. I had the advantage of having the counsel of physicians and surgeons and was anxious to open the gall-bladder, which from various causes I was unable to do. When distension of the abdomen from tympanites and ascites became intense I tapped with a Southey's drainage-tube, and during a period of three hours more than five measured pints of fluid escaped, which gave much relief. A few days afterwards I was able clearly to define the margin of the liver with no gall-bladder to be felt in the notch, and I then came to the conclusion that the case would end fatally at an early date. Her husband reminded me that a well-known operating surgeon had said that whilst he could not at the time propose to operate he would do so if she were dying, and expressed his strong desire for the operation to be performed. I gladly acceded, and on opening after fixing the gall-bladder relieved it and the liver of a free continued stream of thick bile, three pints of ascitic fluid being removed at the same time. Although the patient was almost unconscious she took a little A.C.E. mixture well and had no pain. The relief was very great, and all moaning and groaning and jactitation, which had previously caused much distress to her family, ceased, and she was tranquil and perfectly easy to the end. The day after her decease a careful post-mortem examination was made. The wound was in a completely satisfactory state, with bile showing its course into the gall-bladder, whilst no bile had made its way into the abdomen, although, owing to the liver being much enlarged and hardened, and the bladder, though full, well under the liver and not enlarged, it was very difficult to bring it to the surface, and the lower part of the wound in the latter had to be made good with omentum which presented. The lungs were sound; the heart was sound, with the exception of a little fat in excess remaining on it; the spleen was sound; the kidneys were enlarged and turgid, but were otherwise sound; the liver was enlarged and hardened, but beyond that was normal with no deposit of any sort on or in it; and the pancreas, which I had maintained was the cause of the jaundice, was sound in its entire texture, but for an inch and a half from its entrance into the common duct the pancreatic duct was obstructed, as also were the branches opening into it there, with numerous calculi of various sizes, which could scarcely be scraped out when it was laid open. This was the whole cause of the jaundice and death, and my extreme regret remains that from various causes I was unable to perform the operation when I first saw its necessity, being under the conviction that the liver was sound and that pancreatic obstruction of the common duct of some sort was the true cause of the malady. Such extreme obstruction of the pancreatic duct by calculi I believe to be rare, and in this case the absence of fatty stools, the presence of which usually facilitates diagnosis, was the result of my having given the patient, with whatever else I was prescribing during several months, liquor pancreaticus. I consider that one is justified in deciding when jaundice gradually persists to an extreme degree that the liver is a healthy organ, doing its duty in forming its secretion, but being prevented from discharging the said secretion by obstruction, possibly by gall-stones, which can be frequently got rid of, as I have repeatedly done, by Dr. Harley's excellent method and by medicine and olive oil; or if this cause cannot be diagnosed, then by either cancer or other enlargement of the pancreas itself, or as in this case by calculi. One may also in several obscure conditions of digestive derangement bear in mind the possibility of pancreatic calculi of moderate size being present.

Clifton.

SUPERANNUATION ALLOWANCES. — Dr. Robert William Goldie, lately medical superintendent of the Poplar and Stepney Sick Asylum, Bromley, has been granted a superannuation allowance of £250 per annum.—Mr. Robert Blagden, L.R.C.P. Lond., M.R.C.S., lately medical officer and Public Vaccinator for the Minchinhampton District of the Stroud Union, has been granted a superannuation allowance of £25 per annum.

OBESITY TREATED BY AN EXCLUSIVELY NITROGENOUS DIET AND COPIOUS LIBATIONS OF WARM WATER.

BY THOMAS D. SAVILL, M.D. LOND,
FORMERLY MEDICAL SUPERINTENDENT OF THE PADDINGTON INFIRMARY;
With Remarks on the Excretion of Uric Acid by
ALEXANDER HAIG, M.D. OXON.,
PHYSICIAN TO THE METROPOLITAN HOSPITAL.

A MAN aged sixty-eight was admitted to the Paddington Infirmary on Sept. 21st, 1891, on account of ulcer in the leg. He was about 5 ft. 10 in. in height and weighed 20 st. 4½ lb. His girth was so great that it was necessary to get a special suit of clothes made for him, and he was quite unable to walk, chiefly by reason of his bulk, but partly also because of stiffness of the hip-joint due to morbus coxæ senilis. There were also a suspicion of chronic Bright's disease and a history of gout.

He had formerly (from August, 1890, to February, 1891) been under my treatment, on the same plan as the one about to be described, for obesity and ulcer of the leg. Whilst in the infirmary on that occasion his ulcer had healed and his weight had been reduced from 21 st. to 17½ st.; but a month or two after leaving his leg again became ulcerated and his bulk again began gradually to increase.

Stoutness had run in his father's family and his father had been as corpulent as himself, but his mother and her family were all small people. As for the patient, he had lived an abstemious life, though he had been in the habit of drinking one or two pints of beer a day with his meals, and had worked hard as an engine-fitter all his life. He had been stout as a child; but at the age of twenty-one he weighed only 12 st., and, though always rather bulky, had but recently been unable to work on account of his size.

He was at once put upon a diet consisting of one pound of cooked fish and one pound of cooked lean meat daily, with a pint of warm water sipped at intervals, as warm as he could comfortably drink it, every two hours. The fish and the meat were distributed into various meals according to the taste of the patient; but no bread, vegetables, milk or *any other article* were allowed. He was an intelligent man and entered heartily into his treatment—a most important factor in success. He managed to drink about five or six pints of warm water in the day. His weight began at once to fall steadily. Thus, on Sept. 21st it was 20 st. 4½ lb., on Oct. 2nd 19 st. 8 lb., on Nov. 6th 18 st. 4 lb., and on Dec. 4th 17 st. 8½ lb. About Christmas time his dietary was a little relaxed and he immediately went up 7 lb., but by Jan. 15th he was reduced again to 17 st. 1 lb.

After four months' treatment, in January, 1892, he began to rebel a little and the diet was modified by the addition of two small slices of bread and butter with breakfast and tea, and the addition of milk and sugar to his tea in the morning and evening. Nevertheless the weight still continued to diminish (Feb. 7th, 16 st. 7 lb.). On Feb. 7th he returned to ordinary meat diet, such as the other patients had, with the omission of potatoes. At first the weight went up a few pounds (16 st. 10½ lb.), but then the downward course was resumed, and on March 21st, 1892, he weighed 16 st. 6½ lb. He then left the infirmary to return to work, having lost nearly four stones in six months, during four months of which he was on a strictly nitrogenous diet, and for one and a half months of which he was on ordinary diet, without potatoes.

His ulcer was healed within a month of his admission and he began to get up and about, taking as much exercise as the ward space allowed; and, although he took no medicine excepting an occasional aperient, the pain and stiffness of the hip-joint soon disappeared. He passed large quantities of urine of low specific gravity, which very frequently contained crystals of uric acid. Dr. Haig's valuable observations on the urine are appended. Once only it contained a trace of albumen (Nov. 6th, 1891). I still see him occasionally, and though he takes ordinary diet, *avoiding beer* only, he keeps at about 16½ st. and in good health. He continues to take draughts of warm water when circumstances allow.

The *rationale* of this treatment is apparently that the patient supplies the necessary hydro-carbons and carbo-hydrates, which are absent from the diet, from his own

economy—in other words, he lives on his own fat. I am indebted for the suggestion of this treatment to my friend Dr. Lloyd of the Lambeth Infirmary. It is, I believe, something like that adopted at Marienbad. It was certainly very successful in this case, for the man was not only thinner, but was in much better health in every way and able to resume work. The permanence of the improvement after resuming ordinary diet is a fact worthy of special attention.

It is useless to attempt the regimen without the hearty coöperation of the patient. I tried to treat another man, weighing 17½ st., in the same ward as this patient, but the treatment entirely failed, because, as we subsequently learned, he did not strictly carry out the dietary. I am inclined to attach much importance to the copious libations of warm water, and to attribute the permanence of the improvement of the patient under notice to the facts that he continues this as far as possible and that he avoids beer. On the other hand, it is a little difficult, on this supposition, to reconcile the results here narrated with the success met with by other observers who adopt the plan of depriving their patients of almost all fluids.

Remarks by Dr. HAIG.—I was glad to see in this case what effects an exclusively animal diet had on the excretion of uric acid, and I also hoped to discover why obese patients when put on it only rarely suffer from attacks of gout, though in ordinary dietetics any excess in meat food has such a powerful influence in producing this disease. The following are some of the results obtained from an examination of the urine of the twenty-four hours ending 8 A.M. on Dec. 21st, 1891, when the patient was on the special diet and had been on it for three months. That of twelve hours of the day was dark amber and measured 44 ounces, that of the night was pale amber and measured 74 ounces; the mixture, 118 ounces, was pale amber, free from deposit, of sp. gr. 1012 and containing no albumen. This yielded 1·5 per cent. of urea (= 817 grains) and 0·04704 per cent. of uric acid (= 25·5 grains), giving a relation of uric acid to urea of 1 to 32. I examined the urine on other occasions and found between 800 and 900 grains of urea and about the same proportion to it of uric acid as that above given, and there was no evidence that he was retaining any large quantity of uric acid. His weight at that time was about 17 st. 12½ lb, so that his excretion of urea was about 3·4 grains per pound. An examination of the urine of the twenty-four hours ending Feb. 10th, 1892 (being the urine of the second day on ordinary diet), gave the following results: Day urine, 34 ounces; night urine, 72 ounces; together 106 ounces; pale amber in colour; sp. gr. 1010, and containing a trace of albumen; urea, 0·95 per cent. (= 465 grains); uric acid, 0·03696 per cent. (= 18 grains); relation of uric acid to urea, 1 to 26 (nearly). His weight is now 16 st. 7 lb, and the urea is therefore equal to 2 grains per pound and the excretion of uric acid has decidedly increased. The specific gravity of the urine was always low and it was scanty by day and profuse at night. His pulse, whenever I examined it, was below 70 in rate and of distinctly high tension. It will be noted that 3·4 grains of urea per pound is just below the normal physiological quantity, and though no doubt something must be allowed for his adipose tissue I may state that I have now under my care a man of less than half his weight who is on a highly nitrogenous diet for diabetes, but who still probably takes less nitrogen than this man, yet he often passes upwards of 800 grains of urea, or about 7·0 grains per pound—so that, even if it is admitted that the large quantity of fluid taken did to some extent interfere with digestion and a further large allowance is made for adipose tissue, the urea was still very low, considering the diet. Even on the purely animal diet the acidity of the urine was low and he retained but very little uric acid; but had this same diet been given to a younger man without Bright's disease and with more active metabolism, the urea would have been more like 8 to 10 grains per pound, the acidity would have been higher and the uric acid excretion much less (in relation, say, of 1 to 40 or 1 to 50); he would have retained and accumulated much more uric acid and as a result of this would soon have suffered from gout. So far, then, as one can judge from the results in a single case, it is the extremely low metabolic activity in such patients that prevents their accumulating uric acid and suffering from gout. The patient under notice, if the history may be trusted, suffered pretty severely from gout in the feet in previous years; but when he became obese and unwieldy, and consequently unable to work, his metabolism, urea, and acidity rapidly fell; and he continually excreted an excess of uric acid from his joints in place of storing it in them; hence he lost his gout, but acquired uric acidæmia in its place, and this, in the way I have elsewhere pointed out, still further hampered metabolism and produced Bright's disease. So, when he came under observation, he was constantly excreting excess of urate and had no gout, and even the stimulus of the animal diet was insufficient to reverse the process or to cause a storage of urate and a relapse of his gout. I am much indebted to Dr. Savill for the opportunity of investigating such an interesting case.

NOTES ON A

CASE OF CHRONIC ECZEMA, ASSOCIATED WITH THE DEVELOPMENT OF CERTAIN NERVOUS SYMPTOMS (HYSTERO-PSYCHOPATHY).

BY N. HAY FORBES, L.R.C.P. LOND., M.R.C.S. ENG.,
LATE SURGEON, ARMY MEDICAL STAFF.

THE following clinical notes of a case of chronic eczema, the well-known, common, idiopathic, superficial dermatitis associated with a well-marked train and evidence of reflex disturbance of the equilibrium of the central nervous system, may be of some interest.[1]

A man aged seventy-two, with iron-grey hair and a careworn, despondent expression, came under my care in September, 1891, suffering from an intractably obstinate and chronic form of eczema of some two years' duration. He had been thirty years in India, and during that period had enjoyed average health, not having had any serious illnesses, with the exception of fever and ague. Twenty years ago he had had eczema, which had continued for a considerable time. There was no direct evidence of any syphilitic taint or of gout or rheumatism, and he stated that he had always been of temperate habits; of late years, however, anxiety and prolonged worry from pecuniary losses had weighed heavily on his mind. When first seen he looked pale and dejected and generally emaciated, the skin being dry, brawny and pigmented. Over the entire surface of both forearms, on the outer surface of the arms and on the extensor aspect of both thighs there were large, irregularly defined and widespread patches of dry, crusty, pruriginous eczema heaped with flakes, scales and scabs, the patient complaining of intense irritation and itching and an almost insufferable smarting and tingling. The scalp and nails were free from the eruption; the tongue was furred, moist and flabby; the digestion was imperfect; the teeth were deficient; the bowels were apparently regular; the urine was clear, alkaline, of sp. gr. 1020, and with no albumen or sugar; and the pulse counted 76 beats to the minute and was regular, of good tone and volume, and with no marked degree of tension or of atheroma—that "rouille de la vie," as the late Professor Peter termed it. In the chest there were traces of old-standing bronchial catarrh, but no other adventitious sounds; the position of the heart, its area of dulness, its impulse, and the sounds at the base and apex were all normal; and the temperature was 98·4° F. The patient was ordered a mixture containing tincture of rhubarb, liquor strychniæ, and extractum cascaræ liquidum, combined with a bland, nutritious, non-saccharine diet, and locally a lotion composed of Goulard water (liquor plumbi subacetatis dilutum), tincture of opium, glycerine and rose-water, to be kept constantly applied with the help of clean linen or old silk rags. Rest was also enjoined, and the only alcoholic stimulant allowed was one ounce per diem of whisky at dinner in seltzer or potass water. During the first week there was some improvement in the general condition of the skin, being evidenced by less hyperæmia, less pain and less irritation. His health had also improved, but he still continued to be mournful in expression and morose in manner. He was able to return to his home, but on Sept. 11th he revisited Tunbridge Wells, being in much the same condition as when he first came under observation, and I was informed that he had of late become more depressed and despondent and at times unreasonably irritable, losing control over himself. In conversation one noticed some loss of power in the acquisition of ideas and in the retention of recent impressions. The arms were now carefully fixed in straight

[1] Fagge's Practice of Medicine, vol. ii. p. 772.

splints in order to prevent his scratching and tearing himself, and the lead and glycerine lotion was applied frequently during the day. At night the limbs were thoroughly dusted with zinc and starch powder. He was now ordered a mixture of bromide of ammonium, aromatic spirit of ammonia, digitalis, tincture of opium, tincture of hyoscyamus and syrup of orange. There was no cough or any sign of recent bronchial catarrh, and the bowels were acting regularly.

Sept. 26th.—There is marked improvement in the condition of the skin, both arms and the left leg being almost well. Local applications were persevered with as before. The patient was ordered a pill of arseniate of iron (Extra Pharmacopœia) twice a day after food. The condition of the nervous system and mind was about the same, the patient at times becoming very excited and emotional. A trained nurse is constantly in attendance, night and day.

Oct. 4th.—He had a well-marked hysterical fit, being excited, shouting and praying incoherently and crying and laughing inanely. The fit vanished rapidly under moral influence and the judicious use of cold water, and the patient, becoming calm, slept soundly during the night.

5th.—The eczema is almost completely cured, local hyperæmia and pigmentary bronzing being the last relics of the disease. The moral treatment of the case was carried on as before. A trained male nurse is in attendance in lieu of the two female nurses. The patient's relatives wisely consented to absent themselves for a time and to refrain from any well-meant but misplaced sympathetic communication with him.

21st.—He has continued to improve steadily. The hysterical phenomena have been rapidily lessening in force and frequency, the patient becoming by degrees calm and self-possessed. He takes an intelligent interest in his surroundings. His appetite is good and he sleeps well. His bowels are acting regularly; he has been taking a mixture of citrate of iron and ammonia, ammoniated tincture of valerian, compound tincture of cinchona and spirit of chloroform, and is undergoing a course of massage.

22nd.—His pulse is 74 and his general condition of health has much improved. There has been no recurrence of the eczema; his appetite is good, and he enjoys taking out-door exercise (walking and driving).

24th.—He returned home, having made a good recovery.

Nearly a year afterwards I heard from his friends that he was in very good health and had not had any return of the eczema nor of any neurotic symptoms.

The case presents some features of interest, as follow: 1. The relationship between the chronic dermatitis and the phenomena of reflex nervous disturbance, a relationship which obtains in other skin eruptions—e.g., herpes zoster. Writing on this subject, the late Sir Erasmus Wilson[2] remarks: "Constitutionally, disturbed nervous function, however induced, by producing disturbance of the circulation and nutrition of the skin, is amongst the commonest of the causes of eczema. In the moist forms the suffering assumes the character of pain, tingling, shooting and aching, the pain sometimes being so severe as to be suggestive of the term 'eczema neurosum'"; and in another passage he adds: "It is chiefly obnoxious through its itching, which is sometimes so great as to produce violent excitement of the nervous system; and prolonged nervous irritation increases the exhaustion of the sufferer." 2. The age of the patient, the chronic and recurrent nature of the disease and the absence of any history of gout, syphilis, rheumatism or other blood dyscrasia are also points to be noted. I have consulted the literature at my disposal,[3] but cannot find any special reference to the pathology of parallel cases. In conclusion I may mention that in the local treatment no preparation of tar was employed, nor was it necessary to resort to vesication or the application of any strong alkaline solution, or any medicated soap.

Tunbridge Wells.

[2] Quain's Dictionary of Medicine.

[3] Duhring's Diseases of Skin, Trousseau's Clinical Lectures, Liveing, Erasmus Wilson, and other eminent dermatological writers.

DERBYSHIRE ROYAL INFIRMARY.—A portion of this institution was formally opened on June 29th. Mr. Walter Evans of Darnley Abbey has promised £10,000 or £12,000 towards the completion of the buildings provided the remainder of the money required be subscribed. The cost altogether will be nearly £100,000.

A COMBINATION TEST FOR COLOUR-VISION.

BY A. ST. CLAIR BUXTON,
SURGEON TO THE WESTERN OPHTHALMIC HOSPITAL.

EVER since its first introduction the telechrome has been officially used at the Admiralty in testing the colour-vision of candidates for the Royal Navy. A reference to this fact will be found in the evidence of Staff-Surgeon Preston, R.N., given before the Committee on Colour-Vision appointed by the Council of the Royal Society, and published in the "Report," June, 1892. The same report (p. 19) contains a paragraph as follows: "The committee has had the opportunity of examining the different tests carried out by the Royal Navy and are glad to find that they are most efficient and of such a nature that it may be presumed that no one can pass them who is sufficiently defective in colour-vision to be any source of danger. The long period over which the examination lasts, however, precludes the adoption in their entirety of these tests for the examination of candidates for railways or the mercantile marine." My original intention with regard to the telechrome was to supply a reliable method of testing the colour perception for coloured lights—as distinct from coloured fabrics—in candidates for marine or railway service who had succeeded in passing the Holmgren wool test, which alone I consider to be insufficient; for it has been shown by more than one observer that some persons who are able to acquit themselves creditably when subjected to examination with wools are yet unable to recognise coloured lights. As first constructed the telechrome was entirely an additional, a supplementary, test. This of course meant that additional time was needed to conduct the complete examination. To obviate this objection—an objection referred to above—I have recently made some improvements in my instrument which enable the surgeon to combine the wool test with the lantern test, and so to examine the candidate completely as regards colour-vision at one single operation. For this purpose the telechrome is fitted with a disc carrying coloured glasses which (with gaslight) show the following colours: (1) pale grass green, (2) pale rose, (3) bright red, (4) bright blue, (5) signal green, and (6) yellow (gaslight). It will be remembered that one of the principal features of the instrument was the lever arrangement, which allowed the operator rapidly and unexpectedly to vary the luminosity. I consider this a most important point in any lantern test because a colour-blind man who is aware of his defect can often learn to recognise the colour for which he is blind by the fact that with equal illumination it appears to be less bright to him than its complementary colour. With an instrument in which the luminosity is constantly being varied there is no fixed standard of comparison and therefore no chance of a man being able to deceive the examiner. In using the new pattern of telechrome the *modus operandi* is as follows: The lantern is placed in a somewhat darkened spot (a closet, a passage, or at the end of a metal tube) fifteen feet from the candidate, who himself remains in daylight with a set of Holmgren's wools on a table beside him. In rotation the test colours are shown in the telechrome with various degrees of illumination, and he is required to pick out the skeins of wool which match each of the telechrome colours, irrespectively of shade. A man who has defective vision for either the coloured lights or the coloured wools will be completely incapacitated from performing the task set him and will be at once detected. No further test is necessary.

I may add that a "fogging glass" is still provided and that it is useful in reproducing the effect of a coloured lamp as it appears when seen through mist. In the railway telechrome the perspective segment has two apertures, one representing the perspective of a railway lamp at 100 yards, the other at 1000 yards. In the marine telechrome the apertures represent the perspective of a ship's light at 100 yards and two miles respectively. Messrs. Curry and Paxton are the makers and supply with each instrument printed directions for using it.

Upper Wimpole-street, W.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL AND THERAPEUTICAL.

A SUCCESSFUL CASE OF INTRA-PERITONEAL LIGATION OF THE INTERNAL ILIAC ARTERY.

BY GEORGE WHERRY, M.C. CANTAB., F.R.C.S. ENG.

A HEALTHY-LOOKING man aged twenty-one had a large pulsating tumour upon the upper posterior and outer part of the left innominate bone. Nine months before admission into Addenbrooke's Hospital he had suffered dull aching pains in the buttock, aggravated by exertion and especially by stooping or using the left side and arm. The swelling had been twice punctured, and blood flowed out freely and in "spurts." During the past month or more the pain had been worse; he was unable to lie on his back. The patient was anxious that an operation should be tried for his relief, the pain of "sciatica" being very severe. He was sent to me by Dr. King of Sudbury for treatment. The swelling was too large and vascular to be safely removed from its firm connexions by operation; it was decided after consultation to tie the internal iliac artery. The case resembles one recorded by Mr. Treves.[1] At the operation an incision was made from below the umbilicus to the pubes. There were two difficulties. Firstly, the vein, which was very large and much in the way, was swollen by the slightest pressure of sponges or retractors upon the upper part. The external or common iliac artery would have been much easier to tie in this case. There was some venous bleeding, which stopped after the artery was tied, but the vein also was tied by a ligature just below the first one to make it safe. The other difficulty was with the light. There had been many days of bright sunshine until the moment of this operation, when a black thunderstorm came on. Large reflecting retractors were of the greatest use, but an electric light would have been better still. The patient made a good recovery. The swelling at once shrank and ceased to pulsate. There has been no pain and the patient can lie and sleep easily on his back. Though I did not venture to remove the tumour and cannot feel hopeful as to a cure, the relief to the distressing symptoms is very great. In a case of sarcoma not suitable for other operation ligation as above recorded is well worthy of trial.

Cambridge.

RECTAL INJECTION OF SALINE SOLUTION IN A CASE OF SEVERE HÆMORRHAGE DURING ABORTION.

BY B. H. NICHOLSON, M.B., C.M. EDIN.,
LATE RESIDENT SURGEON, ESSEX AND COLCHESTER HOSPITAL.

I WAS lately called to see a woman, aged thirty, who had just aborted, the process being accompanied by very severe hæmorrhage, which had nearly ceased on my arrival. The patient was the mother of three children born alive; all the labours had been accompanied by severe loss. So great had been the hæmorrhage in her last confinement that her medical attendant warned her against the risk of a further increase in her family. I found the patient in a deplorable condition from the acute anæmia. The pulse was 140 to 150, small, running and occasionally irregular; the cardiac sounds were faint and the apex beat imperceptible. She was extremely pallid and restless and could not get enough air. She complained of nausea, with constant retching and vomiting of small quantities of mucus. Every few minutes she became thirsty and then faint, and was unconscious at times. Notwithstanding treatment by raising the foot of the bed, bandaging the legs, hypodermic injection of brandy &c., the faintness, sickness and feeble pulse continued, the patient becoming even more prostrate. I determined after an hour to try the effect of a chloride of sodium enema, one drachm to the pint of water, at the temperature of 100°. The patient having had severe diarrhœa I was afraid the injection would not be retained, but this was successfully accomplished by holding a pad over the anus for a few minutes. The effect was extremely beneficial, for within twenty minutes the pulse fell to 120, the colour improved and the sickness and faintness almost entirely disappeared and she expressed herself as feeling much better and more comfortable. In half an hour she was able to take and keep down a small quantity of beef extract. Shortly after she had a little sleep. The patient made an excellent recovery and was able to be out and about a month later. I feel confident that the saline enema saved the patient's life.

Colchester.

[1] THE LANCET, June 4th, 1892.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

WESTMINSTER HOSPITAL.

A CASE OF HYDRAMNION AND TWIN PREGNANCY.

(Under the care of Dr. GRIGG.)

THE following case is one in which an excess of the liquor amnii (hydramnion, or, as some prefer to call it, "polyhydramnion") was present and produced a tumour which presented characters resembling those found in cases of cystic tumour of the ovary. That the resemblance may be extremely close is borne out by a case recorded by Dr. Brouardel, who saw a patient under treatment for supposed ovarian cyst when she was really pregnant, but the usual signs of pregnancy were somewhat masked owing to dropsy of the amnion. Owing to the mistake in diagnosis a puncture was made into the cyst, and much fluid drawn off; it was then found that pregnancy was the cause of the tumour. The woman was not delivered until three months afterwards. In this case, where it was evident that the fœtus was dead and the patient suffered from dyspnœa, the treatment adopted by Dr. Grigg was clearly indicated. This condition has seldom been observed before the fifth month, and is much more common in twin pregnancies. Dr. Bar considers the cause of this condition to be, in the majority of cases, pressure on the umbilical vein. For the notes of this case we are indebted to Mr. G. Browning, resident obstetric assistant.

A multipara aged thirty-five, having had seven children and two miscarriages, was admitted into the Westminster Hospital on Sept. 14th, 1892, for removal of a so-called ovarian tumour. She had a miscarriage in the February of that year and menstruated once afterwards. Since then she had had amenorrhœa. She thought she was pregnant, but at the end of August, finding she was increasing rapidly in size, she consulted a medical man. She was under his care for three weeks, but at the end of that time, finding the tumour to have increased greatly in size and there being a considerable amount of dyspnœa, he sent her into the hospital. On admission the abdomen was enormously distended, bulging laterally to the right and superiorly to the left. The subcutaneous veins were enlarged and the umbilicus retracted. The measurements were: from the umbilicus to the right anterior superior spine of the ilium, 10¾ in.; from the umbilicus to the left anterior superior spine, 10 in.; from the umbilicus to the ensiform cartilage, 10½ in.; from the umbilicus to the pubic arch, 9 in.; the girth at the umbilicus, 42 in.; the girth two and a half inches above the umbilicus, 42½ in.; the girth two and a half inches below the umbilicus, 41¼ in. On palpation the tumour was found to consist of an elastic mass fluctuating all over with the exception of a comparatively hard substance which was felt in the right iliac fossa and partly in the right lumbar and umbilical regions. This was felt only on deep pressure. Fluctuation was felt most distinctly and superficially everywhere. The tumour was dull all over. No intermittent contractions were to be felt.

Fœtal heart sounds could not be detected. The apex beat was displaced upwards to the fourth intercostal space. On vaginal examination the colour of the vagina was found to be blue. An elongated cervix could only be felt with difficulty when two fingers were introduced; it was very soft. The os was patulous and fissured transversely. Ballottement was not noted, but distinct fluctuation was observed. The mammary changes were those usual in pregnancy. On Sept. 16th, owing to dyspnœa and no fœtal heart sounds having been heard after repeated examination, Dr. Grigg resolved to induce premature labour. He accordingly passed the sound into the uterus without rupturing the membranes, the handle passing as far as the external os. This was withdrawn and a soft bougie was introduced and left in its place. Labour came on within three hours and the first stage was extremely rapid. The membranes then ruptured and the whole bed was quickly saturated with amniotic fluid. Two fœtuses were born in rapid succession, the amniotic fluid of the second being greater even than that of the first. A single large placenta was then expelled and the uterus contracted satisfactorily. No post-partum hæmorrhage occurred. The abdominal tumour was now found to have entirely disappeared. The fœtuses were of about six months' development and had commenced to undergo maceration. The amniotic fluid was dark in colour and must have measured about twenty-eight pints. The mother made an uninterrupted recovery.

Remarks.—The features of interest in this case were the great difficulty of diagnosis between the above-named condition and pregnancy, complicated with ovarian tumour, owing to the enormous distension of the abdomen, the superficial character of the fluctuation and the absence of fœtal heart sounds.

ROYAL HOSPITAL FOR SICK CHILDREN, GLASGOW.

A CASE OF MULTIPLE TUBERCULOUS TUMOURS OF THE BRAIN; TUBERCULOUS PERITONITIS AND ULCERATION OF THE INTESTINES, WITH ENLARGEMENT OF THE LIVER FROM NUMEROUS ADENOMATOUS GROWTHS; REMARKS.

(Under the care of Dr. GEO. S. MIDDLETON.)

THIS case is fully recorded, but we would draw the attention of our readers to the principal points of interest in it. In the first place, we may note the extensive disease of the brain, which must have been slowly advancing for a long time, but which produced no symptoms until near the end; in the second place, the presence of multiple adenomatous growths scattered throughout the liver, which made the case of unusual pathological interest.

A male child aged two years and two months was admitted into the Royal Hospital for Sick Children on Aug. 12th, 1891. The child was sent into hospital on account of a swelling of the abdomen, which had been first noticed early in January and had gradually increased in size. For four months before its appearance he had suffered from diarrhœa, which persisted up to the time of his admission, especially in the mornings, to the extent of three or four motions daily, the stools, however, being described as natural-looking. He had no pain except on pressure over the abdomen. His appetite had been good, his sleep was also good and he had been running about all along, although he was reported to have lost much flesh and to suffer from sweating about the head at nights. The father and mother and three other children were all healthy and there was no history of constitutional disease on either side. The child was pale and delicate-looking and somewhat emaciated, weighing 18½ lb. The abdomen was very prominent, measuring in its greatest diameter 21½ in., and the superficial veins in the upper part were greatly distended. The liver was found to be considerably enlarged. In the right nipple line the upper border of hepatic dulness lay one inch below the nipple, whilst the lower margin of the organ was felt four inches below that level. In the middle line the lower border was felt three inches below the tip of the xiphoid cartilage and was not quite regular in its outline; it was sharply defined and gave the finger the feeling that the liver was dense. The surface was quite smooth. The splenic dulness was not enlarged and was not continuous with the hepatic; and the spleen could not be felt. There was no evidence of fluid in the peritoneal cavity. The cardiac dulness seemed to be greatly enlarged to the right side, the right margin lying one inch and a half to the right of the middle line. The cardiac sounds were normal. The lungs were normal, except that the right base seemed to be somewhat encroached upon by the liver. During the first four days after admission the temperature was subnormal, the average being in the morning 97·6° and in the evening 97·2°. There was then an irregular rise to 102° on Aug. 30th. During September there were marked oscillations—for example, the observations on fourteen consecutive days gave as the averages: morning 100·2°, evening 101·7°. During October and November the temperature remained febrile, but it was not so high as before, there being only eleven observations in November over 100° and none as high as 101°. The motions in August averaged two and a half daily, in September two, and in October and November a little over one daily (with a maximum of four). Their number had no relation to the temperature. No sickness was noted. A purpuric rash came out on four occasions and epistaxis occurred twice. The following measurements of the abdomen were noted: Sept. 13th, 22¾ in.; Oct. 12th, 22 in.; and Dec. 1st, 22 in. During his residence in hospital he gained six pounds in weight and he was dismissed much improved on Dec. 2nd. The case was regarded as either simple hypertrophy of the liver or as tuberculous disease of the intestines with amyloid degeneration of the liver.

The child was readmitted on July 15th, 1892, with the same symptoms as before. He was said to have kept pretty well till a fortnight before admission, when he became fretful and out of sorts and lost his appetite. He was not feverish save for one night at the onset. Since then he had lost flesh, diarrhœa had recurred with dark motions, and the abdomen had become more swollen. The physical signs on admission were much as above recorded, except that "there were felt masses of thickened omentum." When Dr. Middleton again came on duty he found (Aug. 9th) that the child presented much the same appearance as on the first admission. The greatest measurement of the abdomen was 23½ in; the superficial veins were not very prominent. The liver maintained much the same outline as in the previous report, but was slightly larger; the left lobe was well defined, whilst the right was not so easily made out; the surface was smooth and examination did not cause pain. The spleen was now enlarged, its lower border being 1½ in. below the hypochondriac margin; the greatest diameter of the splenic dulness measured 3½ in., and it was not continuous with the hepatic or cardiac dulnesses. There was no evidence of fluid in the peritoneal cavity and no omental or other masses could be detected, although examination of the abdomen could be readily made owing to the abdomen below the liver being quite soft. There was no enlargement of the cardiac dulness, the right margin being rather to the left than to the right of the middle line; the sounds were pure. Examination of the lungs did not discover any definite lesion; the respiratory murmur at the right back was, perhaps, less free than at the left, and at the right apex, perhaps, more tubular than at the left; no râles were heard and there was no evidence of pleural effusion. Since admission diarrhœa had been persistent to the extent of three or four motions daily, the stools being very loose and not very offensive. There had been some vomiting at times, and once there was epistaxis to a considerable amount. There was marked clubbing of the fingers and toes. The superficial veins of the forehead were much distended; the pupils were large. On Aug. 15th it was noted that the child was evidently suffering from meningitis. On the 12th he was noticed to be drowsy and sickness had occurred, and the suspicion then arose that it might be the beginning of meningeal mischief. Since that time coma had gradually developed and he had not spoken for three days. His breathing was somewhat sighing and irregular. His pulse was regular, numbering 148. Since the morning of Aug. 14th he had been subject to marked twitchings of the arms and legs and at times there was a certain amount of carpo-pedal spasm. No paralysis could be made out. Tache cérébrale was well developed. The coma gradually deepened without any new phenomena being observed and the child died on Aug. 16th, death being immediately preceded by the vomiting of a considerable quantity of dark, coffee-ground matter.

The following note was made after the post-mortem examination: During the patient's residence in hospital the motions never presented any appearance suggestive of the presence of blood; they were never formed, but they always contained fæcal matter and they were generally of a darkish-brown colour. Blood was not observed in any of the vomited matter except in that immediately before death. There never was any jaundice. The appetite was very fair and he

took considerable quantities of milk, bread-and-butter and pudding—all that he was allowed owing to the diarrhœa. He never spontaneously complained of pain and he allowed himself to be freely handled without evincing any tenderness. The thermometric observations gave as the average of seventeen mornings 99·9° and of twenty-three evenings 100°, the maximum being 102·4° (morning) and the minimum being 97·2° (both morning and evening). The number of motions during his thirty-two days' residence averaged three daily, with a maximum of eight. Sickness occurred on July 19th and on Aug. 2nd, and again on Aug. 11th, 12th, 13th and 14th. Epistaxis was noted on July 26th, but there was no purpuric eruption on that occasion. During both periods of residence in hospital he was very quiet and talked little, and during his second residence he was very sleepy, the drowsiness, however, becoming much more pronounced during the last week of life. During this second residence he was in the habit of getting up and walking about the ward. His gait presented nothing peculiar except what might be referred to the enlargement of the abdomen. He had complete control of the hands and arms and was able to carry toys to the children in the beds beside him. His vision was apparently quite good; the pupils were always dilated and equal. During the days preceding death no distinct paralysis was observed; there was no strabismus; the limbs on the two sides were equally affected with the twitching. For three days before the end he probably did not see, but he was then unconscious or nearly so. His weight on admission was 24½ lb.; his weight after death, 20½ lb.

A post-mortem examination of the body was made forty-eight hours after death. The pericardium was found to be adherent to the right pleura, but not to the heart; it did not contain an undue amount of fluid. The heart was normal in appearance, except that it was pale; it weighed two ounces and three-quarters. The pleural cavities contained no fluid. The left lung was slightly adherent at the base and was freely crepitant throughout; it floated in water and presented no evidences of condensation. The right lung was adherent throughout and otherwise presented the same characteristics as the left. In neither lung was there any distinct evidence of tuberculous lesion to the naked eye (the examination was made by gaslight). The bronchial glands were not enlarged. On opening the abdomen it was evident that there were many and great adhesions in the upper part of the cavity, both the liver and the omentum being adherent to the abdominal wall. The small intestines were quite free and in their normal position; the large intestine in its transverse portion was unduly distended. There was no fluid in the abdominal cavity. On turning aside the small intestines the prevertebral tissue was found to be enormously thickened, presenting the aspect of an irregular tumour; in front of the vertebræ it lay as a large, thick, hard mass, in which were incorporated greatly enlarged mesenteric glands. This extended upwards so as to involve the pancreas and reached the liver. The transverse colon was free, but the caput cæcum was bound down by what seemed to be tumour tissue, which almost enveloped the lower end of the ileum, and for a few inches above the cæcum the colon was tied down by the same tissue. The descending colon was also firmly tied down, especially at the rectum, the tumour tissue having extended down into the pelvis. The duodenum occupied a peculiar position, passing right through the tumour tissue, which, however, had not compressed it so as to cause stricture. The omentum was only slightly thickened in parts and presented nothing of the appearance of a tumour or of masses which could have been felt during life. The intestines contained a slaty-like material. The small intestine presented a somewhat pouched appearance as if from having been unable to extend itself. The higher Peyer's patches were very evident as reddish areas, apparently in many cases somewhat elevated above the surface; lower down many of them presented ulcers, which were large and ragged just above the ileo-cæcal valve. These ulcers in some cases involved the mucous membrane beyond Peyer's patches. In the large intestine there was also a considerable number of large ulcers, one of great size and very irregular being cut through in removing the rectum about two or three inches above the anus. The peritoneal aspect of the bowel over some of these ulcers looked somewhat tuberculous. There were also some appearances of cicatrisation, as if of old ulcers. The stomach was slightly dilated and its contents were dark and semi-fluid. It was to some extent adherent to the mass above described; it was firmly adherent to the spleen and, to a less extent, to the liver. The liver was adherent to the diaphragm and to the abdominal wall, and it had also some connexions with the tumour mass; its surface was smooth, except that here and there there was a slight tendency to nodules. It was, however, readily apparent that it was the seat of enormous numbers of new formations, which were more apparent on section. The whole organ was sown with small yellowish-brown tumours, paler than the liver tissue, some the size of a pin-head, others as large as a pea. It was heavy (1 lb. 6½ oz.) and firm; its outline was uniform and its edge thin. The kidneys were removed without difficulty and to the naked eye presented no abnormality; the left weighed 2 oz. and had a dilated pelvis, the right 1¾ oz. The spleen was large, weighing 4¾ oz.; it was adherent to the diaphragm and to the stomach and was more or less embedded in tumour tissue. The dura mater was found to be adherent to the brain in several places, where superficial tumours were seen to be the cause. The brain was large; its convolutions were somewhat flattened; its general surface was normal as to its blood-supply. It was very soft, so that it could not be removed entire. Numerous hard tumours were readily detected over its surface, presenting when very superficial a dull white colour. The right occipital lobe contained the largest of these, which was an irregularly nodular hard mass larger than a walnut. During the attempt to remove the brain the brain tissue gave way by the side of this tumour and a considerable quantity of serous-looking fluid escaped (probably from ventricles). Other tumours were noted in both hemispheres and were indiscriminately scattered over the frontal, parietal and occipital lobes. Owing to the diffluent condition of the brain tissue it was impossible to preserve the relationship of parts and therefore impossible to definitely locate the various tumours; it appeared, however, that they were mostly confined to the grey matter and its neighbourhood, and they almost felt as if being enucleated as they came away in the fingers which were handling the brain. In the cerebellum only one such tumour was detected. The basal ganglia were unequal, the corpus striatum on the right side being much larger than on the left; no distinct tumours could be felt in them or in the pons and medulla. The ventricles were somewhat dilated. The optic chiasma was the seat of some exudation, which had matted the parts in that neighbourhood together. In all, there were some two dozen tumours found, from the size of a pea to that of a walnut. The large one mentioned as being in the occipital lobe was found to be separated from another mass, more deeply seated, only by soft, diffluent, white matter, and the impression was derived that the two masses had been separated in the process of removing the brain. The calvaria was in parts very thin; the sutures were separated.

Remarks by Dr. MIDDLETON.—Various parts were preserved and kindly examined microscopically by my friends Drs. Coats and R. M. Buchanan. The tumours in the brain were typically tuberculous and the lesion in the mesentery was also of that nature, but some considerable portions of the mass about the cæcum consisted of adipose tissue. The ulcers in the intestine were tuberculous. The chief interest centred in the liver, in sections of which, after hardening, it was difficult to make out any appearance like that of tumours, whilst tubercles were quite readily seen; more detailed examination, however, discovered that these tumours were adenomata, consisting of tissue very similar to that of the liver. I regard this case as remarkable, mainly for two reasons: Firstly, the appearance the liver presented was to me quite unique. To the naked eye it had the look of a liver studded with malignant tumours, and those who were present at the examination regarded it as malignant, probably sarcomatous; it is to be noted, however, that the organ presented a much smoother surface than is generally found in malignant disease. The clinical history, too, was not that of malignant disease, though the absence of pain and ascites would not have negatived that diagnosis, as I have seen—what others must have also noticed—enormously enlarged liver from cancer without either being present. As just stated, however, the microscopic examination showed that the tumours were simple, whilst minute tubercles were scattered throughout the organ. Secondly, the discovery of tumours in the brain took me by surprise. There had been nothing in the symptoms beyond what is commonly observed in tuberculous meningitis, and the diagnosis had been made of tuberculous disease of the bowel with amyloid liver and meningitis. All who have seen much of post-mortem work must no doubt occasionally have met with tumours in the brain which had not been diagnosed during life—tumours which had apparently been latent or whose symptoms had been masked by those of a more pro-

eminent and alarming character due to disease in other organs; but such cases are quite different from this one in that here there were found a large number of tumours scattered through both motor and sensory regions, evidently of very considerable age and yet apparently without causing symptoms till within a day or two of death, and even these symptoms were induced apparently by meningeal affection and not by the tumours. It is also noteworthy that the child's condition had all along been quite favourable for the observation of any cerebral symptoms that might have been present, and he was constantly under observation, so that their occurrence could scarcely have been missed. The mesenteric condition and the ulceration of the bowels were also of considerable interest; but so many cases of a somewhat similar nature are met with that I do not desire to dwell upon this aspect of the case. They probably constitute the primary lesion.

Medical Societies.

OPHTHALMOLOGICAL SOCIETY.

Epithelial Pearl Tumour in the Iris following Implantation of Eyelash in the Anterior Chamber.—The Diagnosis and Prognosis of Pathological Myopia.—Recurrent Third Nerve Palsy associated with Migraine.

AN ordinary meeting of the above Society was held on Friday, July 7th, the President, Mr. HENRY POWER, M.B., F.R.C.S., in the chair.

Mr. F. RICHARDSON CROSS and Mr. E. TREACHER COLLINS contributed a paper on Epithelial Pearl Tumour in the Iris following Implantation of Eyelash in the Anterior Chamber. A boy aged eight presented himself for loss of sight in the right eye, seven months after the eye had been wounded with a piece of wire. On examination the eye was free from inflammation, tension was normal and there was traumatic capsular cataract, with posterior synechiæ. At the upper inner segment of the anterior chamber was a small nodule, from which an eyelash passed downwards in front of the iris. An operation was undertaken to remove the eyelash and, if possible, the small nodule, which was diagnosed to be an epithelial implantation cyst growing from the root-sheath of the cilium. The eyelash was readily removed, but the cyst was so closely adherent to the iris, and this so fixed by adhesions that it could not be extracted, but came away piecemeal in the forceps. The wound healed well. Two months afterwards the tumour had commenced to grow again. The patient then disappeared for nearly a year, when he returned with great irritability, lacrymation, and photophobia of the right eye. The tumour had much increased in size, and as the left eye was sympathetically irritated, and the former operation had been so difficult, the eye was enucleated and sent to Mr. Treacher Collins, who reported the tumour to be surrounded by pigmented iris tissue, and free from the cornea, vitreous and ciliary body. The mass situated in the iris was a cyst with opaque white contents lined by laminated epithelium, the cells in contact with the iris tissue being the best developed, the innermost ones being flat and scaly; the contents of the cavity consisted of fat globules and polyhedral cells in which no nucleus was stained. They were probably epithelial cells undergoing degeneration. The papillary border of the iris was united by newly formed fibrous tissue to the anterior capsule of the lens. Seven analogous cases were quoted as showing that the histology of the tumours was similar and that all have resulted from a long residence of an eyelash in the anterior chamber. In contradistinction the successful result of early removal of eyelashes from the anterior chamber was mentioned and the immediate diagnosis of such a condition and its prompt treatment insisted on.—Dr. ROCKLIFFE (Hull) mentioned a case he had reported to the Society in which a cystic tumour in the anterior chamber had followed the implantation of an eyelash. Since reporting that case he had met with another in which one or perhaps two lashes had been carried into the anterior chamber by a piece of wire penetrating the cornea.—Mr. ERNEST CLARKE referred to a case he had reported two years ago, in which he had been able to remove the eyelash.—Mr. SNELL (Sheffield) spoke of a case now under observation in which he had operated for cataract fourteen years since. There was now a cyst in the anterior chamber which he thought might be of the same nature as that described.

Dr. RAYNER D. BATTEN read a paper on the Diagnosis and Prognosis of Pathological Myopia. After reference to a former paper in which he maintained that myopia was frequently the result of constitutional disease,[1] he said that the object of the present communication was to show that a diagnosis of the constitutional cause of myopia may be made from the condition of the fundus. Physiological myopia should be confined to a simply refractive condition, in which there is no fundus change of any kind. Physiological myopia is not necessarily a refractive condition, and may even be associated with emmetropia or hypermetropia, and is characterised by the formation of crescents, the stretching and distortion of the vessels, the presence of staphylomata, and by local and general disturbance of pigment. At present physiological myopia is not distinguished from pathological myopia in its early stages, but only when the latter is far advanced. Pathological myopia may be acute, chronic, progressive or stationary. The acute may end in arrest or become chronic, and may be the result of various constitutional diseases. In the chronic form a diagnosis may be made between myopia due to cardio-vascular conditions, struma and inherited syphilis and unhealthy occupations. *Pigmentary changes associated with myopia:* Marked pigment change at the margin of the crescent is a sign of acute myopia, and in the chronic form a distinction is made between a thin choroid, rendering the choroidal vessels visible and occasionally associated with a very fine dust-like retinal pigment change and a choroid in which the pigment appears to be divided into islands; the former is attributable to cardio-vascular conditions; the latter, to strumous or specific disease. *Staphylomata:* Four classes: (1) That in which the staphyloma is in the macular region; (2) that in which it occurs on the nasal side; (3) that in which the optic disc forms the deepest part of the staphyloma; and (4) that in which it takes place towards the periphery. In all cases except the first the refractive condition at the optical axis is no measure of the extent of the myopia. Peripheral myopia is a cause of astigmatism, by causing distortion of the lens and cornea. *Distortion of the vessels:* Three forms: (1) When the vessels are drawn from their normal course in relation to the optic disc; (2) when they appear stretched and straightened; (3) when they emerge by separate branches from the optic disc. The direction of the distortion of the vessels depends on the position of the staphyloma. This is particularly marked in cases of nasal staphyloma, the vessels being drawn to the nasal side of the optic disc and the macular branches having to bend back in order to supply that region. Distortion of the vessels is one of the early signs of commencing myopia. The direction of the distortion points to the position of the staphyloma and the degree of the distortion or stretching of the vessels is an important factor in the prognosis. Central (physiological) cupping of the optic discs is a form of the staphyloma and an early manifestation of commencing myopia and responsible for the exit of the vessels from the optic disc in numerous branches, the main trunk of the vessels having been drawn into the staphyloma. The early premonitory signs of myopia are central cupping, distortion of the vessels, commencing crescents and astigmatism.

Mr. SNELL (Sheffield) related two cases of Recurrent Third Nerve Palsy associated with Migraine. One was in a young man aged twenty-seven. Migraine had existed since the age of ten, but only for the last seven years had the eye been closed with the attacks. The attacks occurred at first at intervals of about eight weeks, then at every two or three weeks, and lasted for three or four days. The palsy of the third nerve was practically complete; ptosis and paralysis of the ocular muscles, together with dilated pupil and palsy of accommodation. The attacks commenced with vomiting and headache. The ocular palsy in the interval did not completely pass off, and the latest accounts, two years after he had last been seen, indicated that the drooping of the lid was becoming more permanent. The second case was in a girl aged eighteen. She had two attacks at intervals of four years, though migraine outbreaks continued in the interval. Each time she had made a perfect recovery, though the third nerve was not, at the worst, as completely involved as in the first case. Recovery was much longer in taking place. Mr. Snell gave additional particulars of a similar case he had brought to the notice of the Society some years ago. He remarked

[1] Ophthalmic Review, January, 1892.

that the shorter the interval the more rapid appeared to be the recovery in these cases, and also that the affection was always monocular and showed no disposition to affect the other eye.

Living and Card Specimens.—Mr. WORK DODD: Pemphigus of Conjunctiva.—Mr. HOLMES SPICER: Ectopia Pupillæ.—Dr. BATTEN: Pigmentary Moles in Retina.—Mr. MACKINLAY: Hyperostosis of Skull.—Mr. LAWFORD: Microscopic Sections of Sarcoma of Conjunctiva.—Mr. ADAMS FROST: (1) Retinitis Proliferans; (2) Papillary Growth of Cornea.

Election of Officers.—At the conclusion of the meeting the annual general meeting of the Society was held for the election of officers for the ensuing session and to receive the report of the Council. The following officers were elected:—President: Dr. D. Argyll Robertson. Vice-Presidents: Mr. Edgar A. Browne (Liverpool), Mr. George Lawson, Dr. Stephen Mackenzie, Dr. William M. Ord, Mr. D. C. Lloyd Owen (Birmingham), Mr. Henry Power, Mr. Simeon Snell (Sheffield), and Mr. John Tweedy. Treasurer: Mr. George Cowell. Secretaries: Dr. Charles E. Beevor and Mr. Gustavus Hartridge. Librarian: Mr. W. Adams Frost. Other Members of Council: Dr. Ernest Clarke, Mr. F. Richardson Cross (Bristol), Dr. J. Mackenzie Davidson (Aberdeen), Mr. Robert W. Doyne (Oxford), Dr. A. Hill Griffith (Manchester), Mr. R. J. Lunn, Dr. Joseph Nelson, Dr. J. A. Ormerod, Dr. W. C. Rockliffe (Hull), Dr. A. E. Sansom, Dr. G. H. Savage and Mr. A. Quarry Silcock.

After the customary vote of thanks to the retiring officers the Society adjourned till October.

Notices of Books.

Outlines of Practical Histology: a Manual for Students. By WILLIAM STIRLING, M.D., Sc.D., Brackenbury Professor of Physiology and Histology in Owens College. With 368 Illustrations. Second Edition, Revised and Enlarged. London: Charles Griffin and Co., Limited. 1893.—Dr. Stirling has done good service to the student in bringing out a second edition of his "Outlines" containing an account of the most recent and important methods of examining the tissues. The author has had large experience in teaching histology and histological processes, and remarks that many methods have been tried and found wanting. The work is excellently illustrated, very full directions are given for section cutting, and the different kinds of microtomes, as those of Rutherford and Cathcart, the Cambridge rocker, Malassez's modification of Roy's instruments for cutting sections in air and under a fluid, Minot's microtome, Thomas's sledge microtome, Williams's ice-freezing microtome, Swift's ether-freezing microtome and Ranvier's hand microtome are all described and figured. Precise directions are given for the microscopical examination of each tissue of the body. This manual is a very useful work and is well up to date.

Das Gesetz der Transformation der Knochen. Von Dr. JULIUS WOLFF, Ausserordentlicher Professor der Chirurgie an der Berliner Universität. (The Law of the Transformation of Bones. By Dr. Julius Wolff, Extraordinary Professor of Surgery at the University of Berlin.) Berlin: August Hirschwald. 1892.—This is a very elaborate study of the arrangement of the bone lamellæ in the head, neck and shaft of the femur in conditions of health and when altered by disease. Great attention is paid to the influence of this arrangement on the function of the bone and upon fractures of the neck of the femur. The work of Ward and Humphry and other English pioneers in this study receives due recognition, as well as that of the author's own countrymen. The subject is illustrated with some admirable plates. In this and in other particulars Dr. Wolff's treatise is the most thorough and elaborate work devoted to this subject.

Mother and Child. By EDWARD P. DAVIS, A.M., M.D., and JOHN M. KEATING, M.D., LL.D. Philadelphia: J. B. Lippincott Company. 1893.—This is a manual for mothers and nurses written by two medical practitioners of large experience. This class of book is, as a rule, not very commendable, but Drs. Davis and Keating's handbook is one of the best that we have seen. The aim of the authors has been to supply a book which may be consulted in emergencies when the advice of a competent medical or surgical authority is not obtainable and to render intelligible to mothers matters concerning their own health and also the rearing and health of their children. By the quiet study of such a book as this a mother or nurse may learn the reason and importance of all the little details of treatment, and thus carry out more intelligently the instructions of the medical attendant. Dr. Davis deals in the first eighty pages with the evolution, the functions, and duties of motherhood. In speaking of girlhood the transatlantic origin of the book is observable in the following recommendation, which seems somewhat strange to our English ideas: "A knowledge of the use of firearms is also of decided value to a girl in enabling her to be calm and courageous under various conditions of threatening danger." The second part by Dr. Keating occupies nearly 400 pages and many of the chapters are most instructive. The important question of the artificial feeding of infants is very fully considered, special directions for the preparation of sterilised and humanised milk being fully given. One of the most interesting chapters is that dealing with education and school hygiene, which might be advantageously studied by all parents. The publishers are to be congratulated on the appearance of the volume.

A Forest Poem. By ROBERT T. COOPER, M.D. London: David Stott. 1893.—Dr. Cooper espouses in rough-and-ready metre the cause so effectively championed by the late Professor Arnaldo Cantani in his treatise "Pro Silvis" recently commented on in the columns of THE LANCET. His apology for the woods and forests is animated and well-inspired, but we think he would have done better to have made it in prose. A versifier who rhymes "grasp" with "mask" and "ever" with "together" has still to master his tools.

A Pocket Case-book for Practitioners and Students. By ALEX. THEODORE BRAND, M.D. &c. London: Baillière, Tindall and Cox. 1892.—A satisfactory note-book is a desideratum for all engaged in the active study or practice of the profession. Most case-books, like the one before us, are very convenient for recording the first general condition of a patient. The defect in all such books is the absence of sufficient space for noting with sufficient fulness the course of a case subsequently to the preliminary examination. Most practitioners select methods of their own to fulfil this end. For all, however, who have no occasion to follow from day to day or for a considerable period the course of a case, whether consultants, practitioners, or students, this note-book will prove a convenient, durable and even elegant medium for memoranda.

JOURNALS AND REVIEWS.

The Journal of Pathology and Bacteriology. No. IV. June, 1893. Edinburgh and London: Young J. Pentland.—This number completes the first volume of this valuable contribution to scientific periodical literature. It opens with some Further Researches on some Parasitic Protozoa found in Cancerous Tumours, by Dr. Armand Ruffer and Mr. H. G. Plimmer, adding fresh details and illustrations of the bodies considered to be parasitic which the writers have discovered within the cell nucleus as well as in the surrounding protoplasm in mammary carcinoma. The positive proofs of the parasitism of the bodies described have, however, still to be furnished—that is to say, if the ordinary meaning of the term "parasite" is to be adhered to. Dr. Berkley of Baltimore contributes a paper on the Intrinsic Nerves of the Kidney, which he has traced to their terminations around the glomeruli and beneath the membrana propria of the urinary tubules. Dr. Soltau

Fenwick, writing on the Pathology of Acute Perforating Ulcer of the Stomach in Young Adults, shows that the origin of such ulcers probably lies in the submucous solitary follicles of the stomach. There are two physiological papers—viz., one on the ever-fertile subject of the Coagulation of the Blood, by Professor Wright of Netley, and one on the Estimation of Uric Acid in Urine, by Mr. F. G. Hopkins, B.Sc. Dr. Joseph Coats records a case in which tuberculosis developed in an organised blood-clot on the dura mater, adding many suggestive remarks upon the pathological course of the case; and bacteriology is represented in an experimental investigation of Artificial Mineral Waters, by Mr. Charles Slater, M.A., M.B. The editor (Dr. G. Sims Woodhead) writes on Professor Virchow's recent Croonian lecture.

Bristol Medico-Chirurgical Journal. Vol. XI., No. 40. June, 1893. Bristol: J. W. Arrowsmith. London: J. & A. Churchill.—The connexion between some forms of headache and ocular defects is a matter which cannot be too prominently kept in mind, and the able contribution to the subject by Mr. F. R. Cross in an article on Asthenopia and Ocular Headache forms the most notable paper in the present number of an excellent journal. Mr. A. E. Barker relates a case of Gangrene from Femoral Thrombosis which supervened on influenza. Dr. George Parker has a brief note on two cases of branchial fistula, one in a lad of nineteen and the other in an infant. A keen appreciation of the beauties and health-giving qualities of Torquay is expressed in a pleasantly written article by Mr. P. Q. Karkeek, medical officer of health of Torquay. There are records of progress in the departments of medicine, surgery and obstetrics and numerous reviews of recently published works.

The Journal of Comparative Pathology and Therapeutics. Vol. VI., Part 2. June, 1893. Edinburgh and London: W. and A. K. Johnston.—The important subject of tuberculosis is dealt with in more than one article in the current number of this excellent quarterly. Thus the editor, Dr. McFadyean, contributes a paper on the Diagnosis of Tuberculosis in Cattle, in which he shows that the bacilli are not to be found in the blood, but that their detection in milk is fairly frequent in cases of mammary tubercle. Ordinary clinical examination is, however, "almost valueless" for the early detection of tuberculosis. A detailed study of the use of tuberculin for this purpose leads him to the conclusion that in it we have the most valuable means of diagnosis. A good practical paper (with abundant illustrations) is that on some Joint Diseases of the Horse, by Veterinary-Captain F. Smith of Aldershot. There are several other articles, reviews, notes of interesting cases and abstracts from journals in the number.

The Birmingham Medical Review. Vol. XXXIV., No. 179. July, 1893. London: J. & A. Churchill; Birmingham: Hall and English.—Mr. W. Thomas describes a new method for successfully treating Talipes Cavus, and Dr. Christopher Martin continues his notes on the After-treatment of Cases of Abdominal Section. The number contains also some reports of cases of clinical interest, a review of obstetrical and surgical progress and numerous reviews of books.

The Practitioner. Vol. LI., No. 301. July, 1893. Macmillan and Co.—In a clinical lecture Professor Grainger Stewart details a case of Myxœdema treated by Thyroid Feeding, which was, however, accompanied by severe symptoms of cardiac failure requiring prompt intervention. He points to the need of enforcing rest during this treatment. Dr. Francis Hawkins concludes an essay of Croupous Pneumonia in Children based on the records of 242 cases, and Dr. George Oliver continues his exhaustive study of Pulse-pressure. Dr. Dawson Williams discusses the period of Incubation of Specific Fevers, taking up several points which arose in the course of the inquiry by the Clinical Society's committee. Dr. A. R. Cushney describes the Pharmacology of Gelsemium Sempervirens and shows that of the two alkaloids contained in it the one, gelsemin, is not nearly so active as the other, gelseminin, which is highly toxic. In the section devoted to Public Health there is an important paper on Infant Mortality in Birmingham by Dr. Alfred Hill, medical officer of health.

The Medical Chronicle. July, 1893. Manchester: John Heywood; London: H. K. Lewis.—The relative merits of asepticism and antisepticism in midwifery practice form the topic of a good practical paper by Dr. T. Arthur Helme. Amongst other conclusions he condemns indiscriminate douching and urges that more attention should be paid to the disinfection of the practitioner and nurse than is habitual. Dr. Graham Steele records a case of Aortic Valvular Disease with "pulsus biferiens," that character of pulse being confined to the left radial. The case was one apparently of valvular incompetence secondary to dilatation of the aorta. The "Chronicle," or abstracts of current literature, which forms the leading feature of the journal, is up to its usual excellence.

Archiv für Pathologische Anatomie und Physiologie und für Klinische Medicin. Herausgegeben von RUDOLF VIRCHOW. (Archives of Pathological Anatomy and Physiology and of Clinical Medicine. Edited by RUDOLF VIRCHOW.) Band CXXXII., Heft 3. Berlin: G. Reimer.—Professor Hugo Ribbert of Zurich describes a case of spina bifida occulta lumbo-sacralis, giving a careful account of its morbid anatomy. The rarity of tumours of the heart and the possibility of diagnosing the condition during life are discussed in a paper by Dr. Leo Berthenson of St. Petersburg in connexion with a case of myxoma of the left auricle which came under his notice. The signs and symptoms simulated those of aneurysm of the arch of the aorta. There is a full bibliography. Dr. K. Touton of Wiesbaden, from histological studies of cutaneous cancers, concludes that Russell's "fuchsin bodies" and Goldmann's "globes" are due to hyaline degeneration. The formation of new bloodvessels in inflammatory products, especially in false membranes, is the theme of a paper by Dr. K. Yamagiwa of Tokio, based on studies made in the Berlin Pathological Institute. He finds no confirmation of the idea that the new capillaries are formed within cells, but by a process of budding (Sprossung) from the old vessels. Professor J. Arnold writes upon "wander-cells," and Dr. Philippson of Hamburg contrasts the lesions produced by the leprosy and tubercle bacilli.

The Medical Magazine. Vol. II., No. 1. July, 1893. London: Southwood, Smith and Co.—That flies may be carriers of contagia is not only highly probable but in many cases has been actually proved. In an able and suggestive article Surgeon-General Sir W. Moore deals with this subject and gives cogent grounds for admitting the agency of these insects in the dissemination of cholera, enteric fever, leprosy and ophthalmia, and there is no doubt that the list may be extended. An ample field for bacteriology is afforded in this connexion. A sketch entitled "A Day in the House of Friedrich von Esmarch on his Seventieth Birthday," by Hanns von Zobeltitz, translated by Mrs. Brathwaite Skeete, is published in this number. The veteran surgeon's recollections are highly interesting—e.g., his description of his adoption of Listerism and of the founding of the German Samaritan Association on the model of the St. John Ambulance Association, with which he became acquainted at the London Congress of 1881. In a second article on Parisian Sanitation Dr. T. M. Legge treats mainly of the pollution of the Seine and shows how the irrigation farms at Gennevilliers are solving the problem of the proper method of dealing with the sewage of Paris. Amongst other articles

we may note the description of the St. John Ambulance Association by Mr. A. J. H. Crespi and one on Medical Aid Associations by Dr. Leslie Phillips. Mr. A. G. Mahomed supplements a recent article on his late brother, Dr. F. Mahomed, and gives ample illustration of his powers of observation and practical skill.

The Sheffield Medical Journal. Vol. I., Part 4. July, 1893. Sheffield: Pawson and Brailsford; Edinburgh and London: Young J. Pentland.—This admirable quarterly concludes its first volume, having fully sustained the promise of its early numbers. Gynæcology is discussed from a new standpoint by Dr. Japp Sinclair. Mr. Simeon Snell records (with a photograph) one of those curious and rare cases of associated movements of the upper eyelid and the lower jaw. The first case was submitted by Mr. Gunn to the Ophthalmological Society and reported on by a committee of that society. Cases of myxœdema treated by thyroid feeding are recorded by Dr. Cocking and Mr. Lewis Owen, marked improvement in the latter's case being shown by photographs. There are several other cases of clinical and pathological interest, as well as abstracts, reviews and the proceedings of medical societies at Sheffield, Nottingham and Derby.

The Canadian Practitioner. Vol. XVIII., No. 6. June, 1893. There are only two "original communications" in this number, one being a translation of a lecture by Professor Senator on Hereditary Ataxia; the other is the record of a case of obstruction of the common bile duct by a growth in which an attempt was made to establish a fistulous communication between the gall-bladder and the intestine. The case proved fatal from secondary hæmorrhage.

The American Journal of the Medical Sciences. Philadelphia: Lea Brothers and Co. No. 255. July, 1893.—The first paper in this issue is by Dr. Heneage Gibbes of the University of Michigan, who by comparing the lesions induced by psorospermosis in the rabbit's liver with the cell-changes in cancer arrives at the conclusion that there is no evidence of parasitic action in the latter. Dr. Forchheimer supports the theory of the intestinal origin of chlorosis and thinks that this is rendered the more probable since the intestine is the chief source of the hæmoglobin of the blood. Another successful instance of cerebral surgery is recorded by Drs. Diller and Buchanan in a case of subcortical cyst of the lower part of the left ascending parietal convolution. The patient was a miner, thirty-five years of age, who had often been injured in his work and who suffered from right hemiparesis coming on gradually, with vomiting and headache for about a month before he became subject to epileptiform attacks. There was aphasia, but no optic neuritis. The local diagnosis of the lesion was confirmed by the operation. Dr. Judson Daland describes the treatment of cholera by hypodermoclysis and enteroclysis, and Dr. Whitridge Williams of Johns Hopkins University contributes a paper on Puerperal Infection, in which he enters into the bacteriological aspect of the question, and deals especially with auto-infection.

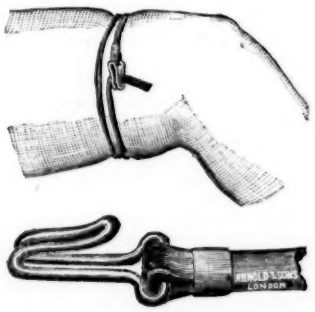
Archiv für Experimentelle Pathologie und Pharmakologie. Redigirt von Dr. B. NAUNYN und Dr. O. SCHMIEDBERG. (Archives of Practical Pathology and Pharmacology. Edited by Dr. B. NAUNYN and Dr. O. SCHMIEDBERG.) Band XXXI., Hefte 4 und 5. June, 1893. Leipzig: Vogel.—Amongst the papers in this journal are the following: Contributions to the Chemistry of Striped Muscle with reference to Rigor Mortis and Effects of certain Poisons, by Dr. Heffter; the Oxidation of Methyl and Ethylic Alcohol in the Animal Body, by Dr. Pohl; the Effects of Ligature of the Splenic Veins, by Drs. Panski and Thoma; and Natural Immunity and its Bearing on the Question of Treatment, by Dr. Klemperer.

The Dublin Journal of Medical Science. Third Series, No. CCLIX. July, 1893. Dublin: Fannin and Co.—A remarkable case of Pharyngeal Spasm is recorded by Dr. Bewley. The patient died suddenly, the cause of death being obscure, but the suggestion made by Dr. Purser that it was due to a focal lesion in the medulla involving first the centre for deglutition and then those of respiration and circulation seems to afford a likely explanation. A clinical report of three years' work at the Rotunda Hospital by Drs. Smyly and Glenn is the only other original article in the number, which contains *inter alia* an interesting account of the state of the medical profession in Australia.

New Invention.

NEW FORM OF TOURNIQUET FASTENING.

MESSRS. ARNOLD AND SONS have introduced a new form of grip or fastening for an elastic tourniquet, for which a patent has been applied. It is very simple, light and inexpensive, made in the form of a hook, but tapering towards the end



with an indiarubber ring for attachment. It can be secured or released instantaneously. By simply placing the tubing in the hook it is held firmly and securely, and by a gentle outward pull it can be immediately released.

THE METROPOLITAN ASYLUMS BOARD.—On the 8th inst. the members of this board were informed that the Local Government Board had assented to the proposal of the managers to purchase land at Hither-green, Lewisham, for the purpose of a fever hospital, the price not to exceed £22,500. The central authority had also given its consent to the purchase of properties known as Horwoods and Mayfield. The Shoreditch guardians, the Deptford vestry and the Limehouse district board have likewise sent representations to the respective authorities urging the importance of additional accommodation being provided for hospital patients during the summer months.

THE DWELLINGS OF THE POOR.—At the monthly meeting of the Mansion House Council on the Dwellings of the Poor, held on July 4th, Mr. John Hamer, the hon. sec., reported that during the month 103 houses had been inspected in the districts of St. George the Martyr, Southwark, revealing 215 defects. A letter urging the necessity of house-to-house inspection at the present time had been forwarded to all the London local authorities. Of the thirty replies received, seven—those from Hammersmith, St. Martin-in-the-Fields, Whitechapel, Holborn, Wandsworth, Hackney and Lewisham—stated that house-to-house inspections were already being carried out. The remainder, except two, stated that the Council's letter should receive attention. St. Pancras declined on the plea that house-to-house inspection might cause alarm, and at Poplar the suggestion had been ordered to lie on the table.

THE LANCET.

LONDON: SATURDAY, JULY 15, 1893.

IF the number of Fellows of the Royal College of Surgeons of England who assembled to celebrate the Jubilee of the Fellowship did not come up to the expectations of Mr. WILLETT and the other promoters of the observance, it must partly be attributed to the festival clashing with the royal nuptials. Owing to the exigencies of practice it is not an easy matter to bring together a large number of members of our profession, and therefore, under the circumstances, a gathering of about 140 Fellows, or one-seventh of the accessible Fellows of the College, must be regarded as fairly satisfactory. Moreover, it must be borne in mind that neither the Fellows nor the Members of the College have any special bond of cohesion, or any very strong link of connexion, with the governing body. For any advantages which have lately accrued to them the Fellows and Members are indebted to several agencies outside the council and to the advocacy of the medical press and more especially of THE LANCET. For the ancient councillors who promoted the foundation of the Fellowship few can feel any great amount of enthusiasm, even if it be correct that the conception originated within the council itself. Possibly it may be so; but movements apparently spontaneous can generally be traced to external irritation and spring from reflex action, and close corporations are not usually in the habit of reforming themselves without any outside pressure. In the case of the Royal College of Surgeons the constitution established by the Charter of 1800 and modified in 1822 had long attracted the attention and earned the reprobation of the independent thinkers in the profession. A self-elected council; councillors removable only by death or resignation; an entire absence of responsibility; the Members of the College, on whose fees the College depended for the payment of its expenses and the remuneration of its officers, totally neglected and ignored; the Court of Examiners supreme in the council; the establishment of monopolies in teaching and education in favour of the schools connected with the hospitals in London; notoriously inefficient and inadequate examinations; and the library and museum useless and inaccessible—were the main features in the condition of the College, which long before the council began to move produced agitation within the ranks of the profession and led to public meetings, an indignant outcry in the medical press and petitions to Parliament. On Feb. 18th, 1826, upwards of 1200 members of the profession assembled at the Freemasons' Tavern, under the presidency of Mr. LAWRENCE, to consider the best means of remedying the abuses which existed in the government of the College. Speaking of the position of the Members, Mr. LAWRENCE said: "Now, gentlemen, as to the share which the commonalty have in the concerns of the College. You perhaps may be acquainted with it, but I confess I am not in a situation to describe what that share is. (Laughter and cheers.) As far as I am able to understand it, it consists of a series of negative rights and privileges—in fact, gentlemen, the 'commonalty,' by which I mean the members at large, are not recognised as possessing any connexion with the administration of the affairs of the College. They have no voice in the election of the ruling powers of that institution; they have no control over the expenditure of its funds; they have an extremely limited access to the museum which has been deposited there. During eight months of the year the general body of the profession has no power of using it at all, and for the four months when it is partially opened no member of the profession engaged in active practice can by any possibility take advantage of the opportunity in the way that it is granted by the College." At this meeting the late Mr. WAKLEY stated that a *radical* reformation in the constitution of the College was imperiously called for and carried a resolution in favour of a petition to the House of Commons praying for the appointment of a committee to inquire into the abuses of the College with a view of obtaining a new Charter, and a committee was appointed to prepare the petition for presentation to an adjourned meeting. This committee, of which Mr. TYRRELL was the chairman, applied to the council of the College to learn whether the council would join the Members in their efforts to obtain a new Charter. The council refused to have anything to do with the committee. It would seem therefore that the movement for a new Charter to enfranchise the Members originated outside the council. The institution of the Fellowship was not a radical reformation. It was a restrictive measure politically, for its object was to limit the exercise of the franchise to a selection only from the Members of the College. The Charter of 1843 promoted by the council abolished the graver scandals of the ancient constitution, and councillors were no longer elected for life by the agency of the council itself, but the council was continued as an autocratic, irresponsible body, removed entirely from any healthy contact with the Members and articulating with the Fellows by the smallest possible surfaces, admitting of the most limited movements. No provision was made for consulting the general body of Members or even the limited constituency of Fellows, for all discussion at the election meetings was expressly prohibited and personal voting only was allowed. Politically the Fellowship does not deserve any jubilee—its great value lies in its being a surgical qualification of high repute and value. In this aspect it is a deserving institution, and we can join with Mr. BRYANT in his high estimate of its merits. "The establishment of the Fellowship by examination has been a potent force in promoting the science and art of surgery, in promoting a spirit of emulation amongst surgeons and elevating the character of the surgical profession." On the other hand, its political scope is so narrow that the greatest dissatisfaction exists amongst the Fellows themselves at their entire exclusion from any effective control over the administration of the College or from any real voice in the management or the expenditure of the funds. Only by a further radical reformation can the Fellowship be made to yield fruit in the future, and, if this radical reformation comes, it will have come not, in the first instance, from the council, but from the stimulating action of THE LANCET and the Association of Fellows; and even when the Fellows obtain all they may desire there will still be

the claims of the Members to be considered and satisfied. Representation of the Members cannot be refused for many more years. *Mutatis mutandis*, Mr. LAWRENCE'S words at the adjourned meeting at the Freemasons' Tavern on March 4th, 1826, possess much of their original potency: "The grievances of which we complain may clearly be traced to the original defective constitution of the College. Self-elected and irresponsible bodies are not fit to administer the affairs of a profession like ours. In order that they should be administered with effect the general sense of the Members should be taken. It is necessary that the ruling authority should possess the full confidence and good opinion of the body at large, and they cannot have this unless they are nominated by the Members. In any new constitution it will be necessary that the general body should elect those who are to be at their head." The institution of the Fellowship with its electoral qualification has excluded the Members of the College from any voice in the selection of their rulers, and, though it may be right to celebrate the jubilee of this institution, the first duty of the Fellows, as soon as they have obtained the position for which they are striving, should be to remedy the grievance suffered by the general body. By the union and representation of both orders the College may be made a great force for elevating the profession in the public esteem.

AMONGST the many complex problems of medicine few are more interesting than those connected with the accurate determination of the methods of action of particular groups of drugs which possess definite chemical affinities. In the Croonian Lectures for 1890 Dr. LAUDER BRUNTON dealt with the relationship which exists between chemical composition and physiological action. This year Professor LEECH has taken as his subject the Pharmacological Action and Therapeutic Uses of the Nitrites and Allied Compounds, and although he modestly considers his scope a more limited one, since he has taken up only one of the many series of groups dealt with by Dr. BRUNTON, those who heard the lectures and those who read them as they appear in our columns, are not likely to find fault with Professor LEECH for this limitation. The smaller area of the nitrites has been most abundantly and profitably worked, and although we are told that some of the groups dealt with are not likely to have any therapeutic value it is a distinct gain to learn the methods as well as the results of one whose work as a pioneer has carried him far away from the beaten track. Numbers of the drugs mentioned and investigated possess unfamiliar names, and indeed are difficult to procure; but the desire to add something to our knowledge has encouraged Professor LEECH in his work. The something which he wishes us to recognise is not a long list of new remedies, but a more intelligent appreciation of the conditions of efficiency of the nitrites as a group. Confining our attention for the present to the first and second lectures, in these he traced the physiological influence of groups of elements, more particularly of the groups formed by oxygen and nitrogen, and then gave a masterly summary of his work on the pharmacology of the nitrites and nitrates. So far as the purely chemical relationships are concerned he laid stress upon the importance of considering whether the nitrogen present acted as a triad or a pentad, and showed that, on this account, many isomeric compounds would not have the same pharmacological, chemical, or physical properties. On investigating the methods by which groups of elements produce their effect, the theory propounded by BINZ, of decomposition with formation of active oxygen, was submitted to close criticism, but as the outcome of very numerous experiments Professor LEECH supports the view of a separate and distinct action of the molecules of which the compound is built up. Amongst other pharmacological considerations the explanation of the headache which sometimes follows will be interesting to all who have had to deal with this symptom; the sense of distension, throbbing, dizziness and headache occasionally experienced is doubtless due to circulatory changes, but the prolonged headache, which may last for twelve hours or more, is, it is suggested, more probably caused by the alcoholic radicles than by the nitrite element, since it may be produced by other amyl, isobutyl and propyl compounds. Although marked lowering of arterial tension may be taken as a fundamental fact in connexion with the nitrites, they have, nevertheless, been employed for such varying conditions that it is time well spent to consider in detail their action on the circulation from a purely pharmacological point of view. The experiments of Drs. BRUNTON, FILEHNE, BERNHEIM, CASH and others accordingly received full consideration, and attention was then directed to Dr. REICHERT'S contention in favour of the action of the nitrites as real cardiac stimulants. Notwithstanding their employment in heart failure from chloroform, it is maintained that increased rapidity is more than counteracted by weakened muscular action and dilatation of vessels. There is no experimental proof that the force of the heart's beat is ever increased, but there is much evidence—indeed some of a strongly personal nature—to show that the nitrites can weaken it and even produce syncopal attacks. Compared with alcohol, the cardiac stimulant power, if any, is exerted much more quickly and passes away more rapidly. The experiments of Sir B. W. RICHARDSON on the comparative effects of nitrite of amyl when taken internally and when inhaled are amply confirmed by Professor LEECH'S observations. Although slight intermission and irregularity of the pulse have in rare instances been noticed after sodium or ethyl nitrite, the cases are more numerous in which previous irregularity disappeared entirely when nitrites were given, hence the valuable deduction that irregularity *per se* is no bar to the administration of nitrites.

Dr. FILEHNE'S idea that the vessels of the lung are not affected by nitrite of amyl is distinctly at variance with Professor LEECH'S experiments with sodium nitrite. The latter observer is inclined to attribute some of the beneficial results in dyspnœic attacks to the relief thus given to the smaller circulation. Close investigation of the effects upon the urinary organs leads to no very satisfactory conclusions; in health the effect appears to depend upon the dose to a certain extent. Under some conditions nitrites seemed to increase the secretion of urine for a short time, but not to influence the excretion of urea. In disease, especially in some forms of Bright's disease, diuresis resulted; but even this was not continuous, and upon the whole, as diuretics, Professor LEECH holds the nitrites in

"light esteem," although he allows them the negative merit of not irritating the kidneys. The influence on temperature is scarcely worth considering, and the diaphoretic value of the group, with the exception of the time-honoured spirit of nitre, is also problematical. The whole outcome of this elaborate investigation of the pharmacology is thus very pithily expressed: "Considering the very powerful action of nitrites on muscle tissue, their effect on other structures is very slight."

Amongst the new facts disclosed with regard to the nitrates, one of the most interesting is the absence of toxic properties when combined with a metal of small physiological activity. By numerous experiments Professor LEECH has shown that dilute solutions of nitrate of sodium or of sodium chloride have the same influence in preserving the vitality of tissues. On the other hand, the organic nitrates and the nitrites possess very similar physiological actions, probably on account of the nitrate molecule being under some conditions converted into the nitrite molecule. Of the five organic nitrates examined only nitroglycerine is official, and this has been shown by Professor HAY to be decomposed in the presence of alkalies and their carbonates or of sodium phosphate, forming a nitrite and a nitrate of the metal. The nitrates of ethyl, propyl, butyl and amyl appear to possess properties very analogous to those of the nitrites, but their action is more prolonged. They bear out the general rule that the toxicity of alcoholic radicals increases with their atomic weight. Ethyl nitrate seems to have given the most satisfactory results, but it has the drawback of causing headache more frequently than does ethyl nitrite.

The more generally interesting and practical subject of the therapeutics of the nitrites and nitro-glycerine, together with the pharmacology of other groups allied to the nitrites, will be more conveniently examined when the publication of the lectures has been completed. Meanwhile we may congratulate the Croonian lecturer both upon his choice of subject and upon the solid nature of his experimental researches.

ALTHOUGH several instances of the phenomena brought to light when Mr. W. H. POWER made his historical researches into the influence of the Fulham small-pox hospitals have since occurred, it is very improbable that there will often be the thorough investigation and masterly array of facts which characterised that inquiry. More especially is this likely to be the case seeing that those who are best fitted to sift the evidence are, at the time of an epidemic, usually overworked in coping with the practical difficulties of the situation. However this may be, it will probably be admitted that a repetition elsewhere of the occurrences which took place on so many separate occasions around the Fulham Hospital, when supported by what appears to be reliable evidence, is well worth recording. Dr. GUEST GORNALL'S report on the outbreak of small-pox at Warrington treats, in the first place, of the facts observed in connexion with the Aiken-street Hospital, in which the patients were first isolated, and, secondly, with the behaviour of the disease around the Hope Hospital, where the major part of the isolation took place. We have thus the unique opportunity of studying a double manifestation of hospital influence in the same town. Following the principle, though not the exact divisions, adopted by Mr. POWER, Dr. GORNALL extended his investigation to the incidence of small-pox upon an area bounded by an imaginary circle, having a radius of 1000 yards from the centre of the hospital; and he further subdivided this area into a series of very narrow zones, by means of circles described every 100 yards from the common centre. On investigating the number of infected houses in the whole of the Borough during the small-pox prevalence, it was found that within the special area the proportion of the houses thus invaded was 3·6 per cent. of the whole, whilst those attacked outside the area amounted to but 0·2 per cent of the whole number. The relative incidence of small-pox within the special area was therefore eighteen times greater than that on the outside. These facts are extremely instructive, but Dr. GORNALL seems to think that the facilities for personal infection were in this special case so great, that inferences as to other methods of spread should be drawn with extreme caution. There is, however, a very remarkable feature to be observed here, and that is, that although there were numerous disturbing factors, such as the non-removal to hospital of some cases &c., nevertheless the gradation of incidence on houses from centre to periphery of the special area still asserted itself; inasmuch as the analysis showed that in the inner zone of 500 yards, the number of newly-infected houses during the use of the Aiken-street Hospital for Small-pox was 3·9 per cent. of the houses in that area, whilst in the outer 500 yards it amounted to but 1·1 per cent. of the houses there. In September the cases were transferred to the Hope Hospital, in which alone the disease was henceforth treated; and it was observed that the special incidence around the Aiken-street Hospital soon afterwards began to decline. Around the Hope Hospital, however, there began to arise that same remarkable gradation of invasion of houses as was noticed in each succeeding epidemic from 1877 to 1884 around the Fulham Hospital and which has been noticed in other places since, and Dr. GORNALL, going into the subject with praiseworthy energy, was able to demonstrate that the proportion of newly-infected houses in the inner 500 yards of the special area was 10 per cent. of the houses in that area, and that on the outer 500 3·4 per cent.; whilst, even under the searching fire of a scrutiny of houses attacked in each separate 100 yards zone, the number of houses invaded diminished uninterruptedly from 37·5 per cent. in the inner to 2·3 in the outer zone. Dr. GORNALL points out that in the special area around the Hope Hospital there were no peculiarities either of density of population or of commonplace unwholesome conditions which might have rendered it especially vulnerable; and, indeed, he also shows that exactly similar commonplace unwholesome conditions must have obtained in other parts of the town. He furthermore states that, in his opinion, the non-removal of sufferers to hospital does not account for the number of persons who contracted the disease in the special area. After discussing fully all the considerations involved, he states: "The statistics as to the relative incidence upon the specially afflicted area and its several parts most clearly agree with what we should expect with air-borne infection as the explanation of our difficulties."

We have no space to go into all the possible explanations of the exceptional incidence of small-pox which all admit frequently occurs around small-pox hospitals. The

fact that many of the cases can be, and are, explained by personal contact, does not justify the assumption that all the unexplained cases would be similarly accounted for could their true origin be discovered; nor does this view of the question in any way reasonably explain the gradual decreased incidence of the disease as the distance from the hospital increases. It may be urged that the virus would be more potent for infection the earlier visitors or nurses from the hospital came in contact with persons outside; but this contention does not suffice to explain why it is that the incidence of the disease is approximately equal on each quadrant of the special area—as was the case at Fulham—or why it is no greater on those quadrants which include the direct routes to the hospital. It has been argued that since those who might contract the disease along the chief route of communication probably live in the neighbouring back streets, no special incidence along a particular thoroughfare need be looked for; but even if we grant this, it might surely be reasonably expected that the back streets radiating from the ambulance route would show a special incidence that is not found in practice. The discussion is not as to whether there be an increased incidence of small-pox around a hospital devoted to its treatment—that is admitted—but as to whether the facts observed are best explained by means of Mr. POWER'S hypothesis of aerial convection under certain—as yet undiscovered—meteorological conditions or by the view of personal contagion. And we venture to think that the latter explanation is quite inadequate to account for the peculiar and gradual decrease in the incidence of the disease inversely to the distance from the hospital on any radial line, which has been so frequently observed. Why, we would ask in conclusion, is it that, if personal contagion is sufficient to account for the influence of small-pox hospitals, no such influence (even in a minor degree) is to be found around the hospitals devoted to the treatment of other infectious disease, as, for example, scarlet fever? In this latter case a freer intermingling of the hospital staff with the public probably takes place, and there are less rigid precautions, as regards complete change of clothing &c., than is the case in dealing with small-pox. Fortunately, however, whichever theory be adopted, a grave responsibility now rests with any sanitary authority which erects a small-pox hospital in a populated area. We commend Dr. GUEST GORNALL'S report to all those interested in this subject.

FRENCH CANADA enjoys an honourable record in the care and cure of the idiot young. Half a century ago SEGUIN achieved results quite astonishing in the rescue of these unhappy "victims to society's misdeeds." His methods were those of the educator rather than those of the physician, but he broke ground on which medical advance was shown to be possible, inasmuch as he may truly be called the pioneer of that combined system of training, mental and physical, which has been pursued with such gratifying success at Earlswood, in Dublin and in Dundee. Just sixteen years ago a new and a bolder method was introduced—again from French Canada. Dr. FULLER of Montreal advocated craniectomy for the relief of the idiot young, and in 1877 performed the first operation ever attempted with that object. He made an incision in the cranium of an idiot child, with the avowed aim of giving expansion to the cerebrum and of obviating the mischief arising from "la suture prématurée." The method was followed up—in France particularly; and on May 9th, 1890, Dr. LANNELONGUE, Professor of Surgical Pathology in the University of Paris, repeated Dr. FULLER'S operation on an idiot girl of four years of age, and reported the case to the Académie des Sciences. His success appeared sufficiently encouraging to warrant other operators as well as himself to practise Dr. FULLER'S method, and his first report was followed by two memoirs, in which he passed in review the results of twenty-five cases that had come under his own treatment. Of these he claimed twenty-four as "cures," and stated that the mean interval between the operation and its successful issue was ten days.

Dr. BOURNEVILLE, one of the clinical staff of the Bicêtre Hospital in Paris, at a recent meeting of the Académie de Médecine read a paper on the entire subject, which, he thought, had been long enough under medical cognisance to justify a review of its present position. What have been the ascertained results of surgical intervention in cases of infantile idiocy? From the intellectual, moral and physical point of view what benefits can we really trace to it? His answer, though not absolutely discouraging, does not seem to coincide with Dr. LANNELONGUE'S somewhat sanguine conclusions. He admits, amidst the scanty information that has come from abroad supplementing Dr. LANNELONGUE'S experience, that "une certaine amélioration" has in some cases been effected; but further than this he declines to commit himself, and desires more statistics scientifically checked. Nay, he has not been able "préciser au juste" the improvement witnessed in the favourable cases which he surmises may be due to the "soins exceptionnels dont les petits malades ont été entourés."

Dr. BOURNEVILLE brought to the notice of the Academy a collection of crania from the pathological museum of the Bicêtre Hospital, which seem to indicate very pointedly that in the case of idiots and arrested organisms of the same kind there is, generally speaking, no premature junction of the sutures. Moreover, by a series of photographs of the cerebra contained in these crania he demonstrated the existence of deep-seated lesions in the former—lesions of which the gravity awakened doubts as to the curative value claimed for craniectomy in the majority of Dr. LANNELONGUE'S cases. Far too profound, far too extensive as well as intensive, far too diversified in his opinion are those lesions to have proceeded from osseous obstruction, or to be removed or even modified by Dr. FULLER'S operation.

Not only so, but, according to Dr. BOURNEVILLE, craniectomy has too often been productive of grave "accidents," of actual injuries, such as paralysis and convulsions—sometimes even of death itself. In these circumstances, so far from his counsel being (with Dr. LANNELONGUE) an abandonment of the medico-pedagogic method initiated by SEGUIN, he recommends a return to it—a return to it, that is to say, under the more perfect conditions elaborated by skilled practitioners. Such a system, judiciously applied and perseveringly prolonged in suitable cases, may be expected to result in successes even more signal than those already achieved. At the same time, Dr. BOURNEVILLE would hardly induce us to put a veto on surgical intervention in infantile idiocy. Such intervention, practised in cerebral

lesions of apparently an even less hopeful character, has often enough realised expectations to warrant not only its repetition, but its extension to all cases in which osseous obstruction of the cerebrum has been fairly diagnosed. The truth, indeed, seems to lie between the methods of both schools—the surgical and the medico-educational. In Italy, as we pointed out just a year ago, Dr. FULLER'S operation has been performed with such success as to have passed into the recognised resources of surgery. We have yet to obtain a series of statistics "scientifically checked" which shall give us the results of a combination of the two systems—that of surgical intervention followed up, or rather accompanied by, that of the pedagogic authority.

Annotations.

"Ne quid nimis."

THE RECENT ELECTION AT THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE result of the election of members of the Council of the Royal College of Surgeons of England, which took place on the 6th inst., will have been hailed with satisfaction by all who sympathise with the movement for securing a reform in the constitution of that great and important institution. To ourselves the issue is naturally gratifying, for the five candidates recommended to the support of the Fellows in a leading article in THE LANCET of June 24th head the list in numerical order at the poll and are followed at a safe distance by the candidates who appeared to be more especially identified with the existing *régime*. It is satisfactory to note that the valuable services rendered in the council by Mr. Macnamara and Mr. Pemberton have been recognised by the constituency. Both of these gentlemen have been deservedly re-elected for the full term of eight years. The most popular candidate was the youngest of the Fellows on the list, Mr. Mayo Robson. Like Mr. Tweedy last year he received support from many quarters and his name came out in varied combinations. Electors who had a vote left after supporting friends and teachers gave it to Mr. Mayo Robson, so that by the united influence of his own merits, his provincial connexion and the aid of the Association of Fellows he was returned at the head of the poll. When the votes were being called by the Secretary it soon became evident that Mr. Robson, Mr. Macnamara and Mr. Pemberton would be successful, and that there would be a close contest between Mr. Henry Morris and Mr. A. T. Norton for the fourth or substitute seat. The issue hung in the balance up to the very last, the candidates polling almost vote for vote, and Mr. Morris securing the seat by the narrow margin of two votes. This keen fight was largely due to the fact that many Fellows bestowed their votes both on Mr. Morris and on Mr. Norton. The result should encourage Mr. Norton to stand again next year, for he did not succeed only because there was an excess of liberal candidates over the number of vacancies to be filled in the council. We regard the result of the election as conclusively demonstrating that the majority of the constituency is in favour of the views advocated in THE LANCET. The time is ripe for a reform in the constitution of the College and for bringing the Fellows and Members of the College into close and harmonious relationship with the council of the College. The committee of the Association of Fellows recently issued a circular which contained a record of the good work already accomplished, and dwelt on the desirability of obtaining for the Fellows of the College a position akin to that held by the Fellows of the College of Physicians. This circular should now be followed by a united effort to obtain from the council a recognition of the principles for which we have long contended. Looking at the present constitution of the council, we imagine that there is an actual majority of its members who sympathise with the movement, and if these views are formulated and brought forcibly before the council the ultimate result can scarcely be in doubt.

EXAMINERS AT THE COLLEGE OF SURGEONS.

OUR readers will see on reference to the report of the meeting of the Council of the Royal College of Surgeons, held on the 7th inst., which will be found on page 155 that the following important motion was proposed by Mr. Willett: "That in the opinion of this council it is desirable that no one who has been elected a member of the Court of Examiners should at the expiration of his period of office be eligible for immediate re-election, but that this resolution shall not apply to the existing members of the Court of Examiners." This was seconded by Mr. Tweedy, but on being put to the vote was rejected by sixteen votes to seven. Whilst regretting that the preponderance of votes was not on the other side, it is a matter for congratulation that the subject should have been definitely brought forward in this specific manner. Till the leaven of reform has had more time to work it will be perhaps too sanguine to expect a speedy reversal of the numbers; nevertheless the fact of such a proposal having been made to the council is a sign of progress. A few years ago the suggestion would have been regarded as Quixotic or Utopian in the highest degree, and probably would not have found a seconder, even if any member of the council had had the courage to propose it. Those who have studied so-called "College politics" closely have agreed that the essence of reform consists in eliminating or reducing to the smallest amount the influence of the examiners in the deliberations of the council. Undoubtedly this position is the keystone of the whole structure of reform, for it is contrary to the principles of good government that persons enjoying the emoluments of office should have a preponderance in the deliberations of the governing body. It is unreasonable to expect that the best government should proceed from a body many members of which are directly and pecuniarily interested to the extent of several thousand pounds, and it is scarcely possible under such circumstances to obtain independent action and impartial and impersonal judgment. The Charter of the year 1852 provides "that every Fellow of the said College who shall from henceforth be elected to the office of examiner of the said College shall go out of office at the end of five years from the day of his election." This obviously means that the usual term shall be five years, though it does allow that it shall be lawful for the council to reappoint the same examiners, and most examiners have been elected for a second term of office and some for a third term; but the desirability of limiting the time of holding office was recognised by the council of the College twenty-seven years ago in a resolution to the effect that no one who had been twice elected a member of the Court of Examiners should, at the expiration of his period of office, be eligible for immediate re-election. Is it not time that this wholesome principle should be further extended? If examiners, however, are to be elected for the second term of office why not for the third, and if life lasts so long why not for the fourth and the fifth, thus reverting to the halcyon days of life examinerships? It may interest our readers to give the names of those who voted for and against

this motion. For Mr. Willett's motion: Mr. Heath, Sir Spencer Wells, Mr. Smith, Mr. Macnamara, Mr. Pemberton, Mr. Willett and Mr. Tweedy. Those who voted against the motion were Mr. Bryant, Mr. Durham, Mr. Lund, Mr. Hutchinson, Mr. Cadge, Mr. Hulke, Sir W. MacCormac, Mr. Harrison, Mr. Pick, Mr. Howse, Mr. Langton, Mr. Rivington, Mr. Jessop, Mr. Marsh, Mr. Morris and Mr. Mayo Robson. The only absent member was Mr. Mitchell Banks, who would have seconded Mr. Willett's motion if he had been present. On scanning the list of names it will be observed that nine past or present members of the Court of Examiners voted against the motion, and only one member voted for it. Further, we must confess to some surprise at finding that the vice-president of the Association of Fellows and one of the specially selected candidates of the Association at the last election have on this motion given an adverse vote. Nevertheless, we hope that Mr. Willett will return to this matter after the lapse of a reasonable interval. With the introduction into the council of so many persons in practical sympathy with the Association of Fellows there should before long be a sufficient number of members of the council in sympathy also with the spirit of a recommendation made by this Association in 1884—namely, "that the members of the Court of Examiners shall be elected annually, and that no member of the Court of Examiners shall hold office for more than five consecutive years, and at the expiration of this time he shall not be again eligible until after a period of two years has elapsed."

A MASONIC TRIBUTE TO THE PROFESSION OF MEDICINE.

MANY members of the medical profession are also members of the ancient order of Freemasonry (indeed there is, we believe, a lodge—the "Æsculapian"—specially devoted to their convenience); it may therefore perhaps not be out of place to call attention in the columns of THE LANCET to the proceedings of a recent meeting of the Quatuor Coronati Lodge as reported in the *Freemason* of July 1st. And first we may note that the following resolution was moved, seconded and carried unanimously, "That the brethren have learnt with great satisfaction that Her Majesty the Queen has been pleased to recognise the many years of brilliant service rendered to medical and hygienic science by our Bro. Benjamin Ward Richardson, by conferring upon him the well-merited honour of knighthood. That the above resolution be recorded on the minutes and a copy forwarded to Bro. Sir B. W. Richardson, M.D., F.R.S. &c." Mr. R. F. Gould subsequently read a paper on the "Rev. Dr. William Stukeley, M.D." dilating on his personal character, that of his intimate friends, and the hints to be gleaned of the state of Masonry in his time, from the entries in his diary, autobiography and common-place book. Mr. Jabez Hogg, M.R.C.S., as a medical man himself, thanked the lecturer for the treat and information he had afforded him. But it is to Mr. Gould's reply that we may more particularly direct the attention of those of our readers who are interested in Freemasonry. He said that "he was greatly obliged for the favourable reception of his paper. On one topic touched upon by Bro. Hogg he would say a few words. It had long seemed to him that there were ample materials, if any brother would take the trouble to look for them, for an essay or article on the medical profession in connexion with Freemasonry. At some future date he hoped to read a paper before the lodge wherein he would attempt to show that the medical profession had contributed more eminent men to the service of Freemasonry than any other. Such was his belief, and it was becoming greatly strengthened by the replies which were coming in to his inquiries from foreign countries. Freemasonry rose at a single bound into notice and esteem on the Duke of Montagu accepting the Grand Mastership in 1721. The Duke was a Fellow of the Royal College of Physicians (as was also the fourth Noble Grand Master the Duke of Richmond). The first Deputy Grand Master was Dr. Beal; the first initiate, after a Masonic torpor of some duration (as we learn from a writing under his own hand), was Dr. Stukeley. With these names he must for the present conclude, though they would only have served as the beginning of a long series had not time and space alike forbidden any extension of the paper he had specially prepared for the evening. One final observation he would make, and that was that he should be glad to receive particulars of any medical brethren, home, foreign or colonial, in the present or past, who are or were eminent as Masons or practitioners, or in any way whatsoever." Mr. Gould is well known as the author of an able "History of Freemasonry," and is fully capable of doing justice to whatever part the profession of medicine may have played in Freemasonry. Those of our readers who are in a position to aid him in his researches will therefore doubtless respond readily and willingly to the appeal contained in the last sentence of his speech (which we quote from the columns of the *Freemason*).

"RUNNING AMUCK."

IN the *Journal of Mental Science* Dr. Ellis, the medical superintendent of the Government Asylum, Singapore, gives an interesting account of this curious condition. *Amok* is the actual Malay word and means a furious assault, whilst its derivatives *mengamok* and *pengamok* respectively signify a furious assault and the person who commits the assault. The condition as described by Dr. Ellis seems usually to be preceded by a period of mental depression, sometimes with suspicion, and the patient, when he breaks out, slashes at, stabs and sometimes mutilates all who come in his way, irrespectively of his creed or nationality. The weapons used are a short spear, a Malay *kris*, or a chopper, and in the old days—and even now in the uncivilised parts of the peninsula—it was the custom to have long forked sticks, which were used against the man who was running *amok* for the purpose of arresting him in his career and pinning him to the ground. Although now such a man when caught is tried in the usual way and usually sent to an asylum, formerly little mercy was shown him and he was killed at once as if he were a mad dog and consequently a standing danger to the community. The condition seems to resemble in many particulars the automatic condition which is sometimes left after an epileptic fit. This in some instances, as is well known, takes the form of running—the so-called "procursive epilepsy"; and if we imagine such a patient armed with a knife and imbued with a homicidal impulse, we have practically all the conditions necessary for the pathological development which is peculiarly Malayan. Apparently, too, the Malay who has run *amok* has no recollection of the assaults he has committed—at least, he never acknowledges that he has; although from the cautious way in which Dr. Ellis refers to this point one would almost infer that he thinks there may be some lurking remembrance of the deeds. But it has not been possible, even under circumstances in which there was no inducement to conceal anything, to bring one of these patients to remember anything about the affair. Fear of consequences, if they do remember, can scarcely be the cause of their reticence, for Dr. Ellis, from his knowledge of the Malayan character, is certain that a Malay would prefer death to lifelong imprisonment. We have referred to the mental depression which sometimes precedes the running *amok*. The Malay is subject to a condition of intense depression—the *sakit-hati* or heart sickness—in which he broods over his wrongs and cherishes feel-

ings of revenge, and this condition not uncommonly precedes an outbreak. If this is so Dr. Ellis thinks that they are to a certain extent responsible, for the man who wilfully works himself, or allows himself to drift, into a blind rage and then runs *amok* must at least be as responsible as the man who of his own free will makes himself drunk and then commits a crime. It is a difficult question, but it is satisfactory to know that the condition is becoming much less common than it was even a few years ago.

OUTBREAKS OF FEVER.

AN outbreak of scarlet fever has lately taken place at Manningham, a suburb of Bradford, some eighty cases of the disease having occurred thereabouts within a very short time. Other outbreaks of the same disease are reported from Macclesfield, where all schools have been closed for a month, and from Lurgan, where similar closure of the barracks has been effected. Enteric fever is reported from St. German's in Cornwall, where it is ascribed to pollution of shallow wells and insufficiently flushed drains, as well as from Kelso and Moira. Typhus fever continues to linger at Dundee. A serious drought is reported in the Rhondda Valley and fever is said to be prevalent and likely to become epidemic. In the chief towns the scarlet fever notified has risen to over 2000 weekly, Leicester and Liverpool furnishing, next to London, most of the cases. The number of fever patients in the London hospitals have risen to nearly 3000 and many cases continue to be refused admission.

THE CORNWALL COUNTY COUNCIL AND THE SALARIES OF MEDICAL OFFICERS OF HEALTH.

WHILST many additional duties have been imposed upon medical officers of health during the past few years there are comparatively few instances in which their salaries have been correspondingly increased. Where local authorities have felt that it would be only fair to their medical officer that his remuneration should receive some addition difficulties have arisen in deciding upon a basis for such revision. This difficulty has been particularly felt in Cornwall, where many medical officers of health receive most inadequate salaries. In a circular recently issued the Chairman of the Sanitary Committee of the County Council states that he has been applied to by many local sanitary authorities as well as by medical officers of health for his opinion as to what would be a fair basis for a revision of salaries. He, therefore, suggests the following basis for consideration: "Where the duties are properly and adequately discharged, to pay a preliminary fee of £15 for every district; after that £5 per 1000 of the population or fractional part thereof where it exceeds 500." In a table appended Mr. Trevail gives the population and area of each sanitary district, the salary at present received by the medical officer of health, and the suggested revised salary worked out upon the above basis. The present salaries bear no relation either to the population or the size of the districts. For example, the medical officer of health for the Launceston rural sanitary district, having a population of over 11,000 and an area of nearly 100,000 acres, receives the magnificent salary of £20 a year; whilst at Calstock, with a population of only 6140 and an area of 5340 acres, the medical officer of health enjoys a salary of £100. In the urban districts the anomalies in the salaries paid are equally marked. If Mr. Trevail's suggestion be acted upon every medical officer of health of the thirty-five urban and rural districts, with three exceptions, will receive a more or less substantial increase of salary and in one instance only will a salary be appreciably decreased. There is much to be said undoubtedly in favour of some uniform basis of payment, but unless the same uniformity can be insured in the discharge of duties such a basis can never be entirely satisfactory. It would be much more reasonable to suggest such a basis as the minimum salary payable; then other considerations, such as the peculiarities of the district, the efficiency and length of service of the officer and other factors would determine whether and to what extent this minimum salary should be exceeded. But the suggestion to remunerate the officers in rural and urban districts upon one and the same basis—that of population only—is, on the face of it, unreasonable. Take, for instance, the urban district of Penzance and the rural district of Bodmin. Both have a population of a little over 12,000, but in the former district the whole population resides within an area of 472 acres, whilst in the latter they are spread over an area of no less than 86,035 acres. In Penzance there is but one system of sewers and a public water-supply, and neither of these will require much of the attention of the medical officer of health. In the Bodmin rural district there is a considerable number of parishes, each one of which will probably cause the medical officer of health more anxiety on account of its water-supply and sewerage system (or more probably from the absence of either or both) than the medical officer of health for Penzance will have for his whole district. In a compact town also the time required to visit any spot where an outbreak of infectious disease has occurred, for the purpose of making inquiries as to its origin &c., will be very trifling indeed compared with that taken for a similar investigation in some remote part of a rural district. If anything like a satisfactory basis even for a minimum salary is to be arrived at, the area of the district must be taken as a factor second only in importance to that of the population. Any effort which is made to secure the more adequate remuneration of those members of our profession who hold the important position of medical officers of health is worthy of our support, but it is to be hoped that the Cornwall County Council will very carefully consider the points indicated above before laying any final and definite suggestions before the sanitary authorities and medical officers of health as to the basis upon which such remuneration is to be calculated.

AN IRISH FASTING GIRL.

IN a recent number of the *Freeman's Journal* there was an account of a fasting girl who was actually interviewed, or at least viewed, by a representative of that journal, and in the same number an account of a lawsuit arising apparently out of the morbid curiosity which the tales about the patient had excited in the district. The girl lies in a humble cottage amongst the hills of Cavan and is said to have remained speechless and lethargic since the beginning of the year. She is nineteen years of age and well-developed, but is said to be "consumptive," and two brothers have, it is stated, died of tuberculous disease. Her present condition is said to have been ushered in by a series of hysterical fits accompanied with delusions, and so ill was she at this time that the last sacraments were administered to her. This was on New Year's Day, and she very soon after this lapsed into the trance in which she has since remained. It is stated that for six weeks no food passed her lips, but latterly it has been possible to administer liquid nourishment. The case is apparently one of cataleptic trance, and, although all statements as to absolute abstinence from food for such a period as six weeks must be received with a certain amount of reservation, there seems to be some ground for believing that patients in this condition can exist on an amount of food which, compared with that consumed by a healthy person of the same sex and age, may seem to be very small. We cannot too strongly deprecate the manner in which this girl is apparently shown as a curiosity to all comers. The representative of the journal in which an account of the case is published had, as we gather, only to present himself to the priest of the parish, who forthwith

accompanied him into the bedroom where the patient was lying. Whatever the condition may be in its inception, there is no doubt that in such patients morbid traits are intensified and perpetuated by the attention which is called "sympathetic," but which is really unkind, and it is scarcely surprising to read in the same paper the account of an action brought against a man, unsuccessfully it is true, of feloniously opening and entering the house in which the patient lay and of having assaulted the invalid.

INSANITARY SCHOOLS.

THE sanitary or rather insanitary condition of our schools is a question towards which public attention is but beginning to be directed, and even yet somewhat tardily. It was only within the last few months that the Education Department issued a circular to its inspectors impressing upon them the necessity of noting any insanitary conditions which presented themselves in the schools visited, and of reporting them to headquarters in order that they might be rectified. Speaking at Brighton on July 8th, on the occasion of the opening of a new board school, built at a cost of over £13,000, Mr. G. W. Kekewich, Secretary to the Education Department, said that he placed good sanitation before good instruction, and would rather see a child out of school than subjected to conditions perilous to health. Few would be inclined to quarrel with Mr. Kekewich in the preference that he showed for good health and healthy surroundings over instruction; and it is to be hoped that those in whose hands the remedy lies will not be slow in correcting the evils which admittedly exist in many of our country board schools.

THE INTERNATIONAL MEDICAL CONGRESS.

OUR own correspondent, dating from Rome, the 7th inst., writes: "The Segreteria Generale (Professor E. Maragliano and his staff) announces further acceptances of the Central Committee's invitation to assist at the Congress. The University of Edinburgh has nominated as its representatives the following members of its medical staff: Dr. Thomas Richard Fraser, Professor of Materia Medica and Dean of the Faculty; Mr. John Chiene, Professor of Systematic Surgery; Dr. William Smith Greenfield, Professor of General Pathology; Dr. Alexander Russell Simpson, Professor of Midwifery, Gynæcology and Children's Diseases; Dr. Thomas Grainger Stewart, Professor of the Practice of Physic and of Clinical Medicine; and Sir William Turner, Professor of Anatomy. The Public Health Department of the British Isles will be represented by Sir Charles Alexander Cameron, Sanitary Officer of Dublin and Examiner in Hygiene to the Royal University of Ireland; by Dr. Henry Duncan Littlejohn, Royal College of Surgeons, Edinburgh; and by Dr. William Robert Smith, Professor of Legal Medicine in King's College, London. The University of Innsbruck has notified to the Segreteria Generale some changes in the *personnel* of its representation at the Congress. Professor Moriz Loewit, Professor of General and Experimental Pathology at that school, having intimated his inability to attend, his place will be taken by Dr. Wilhelm Roux, Professor of Anatomy, and by Dr. Wladimir Lukasiewicz, Professor of Dermatology and Syphilis." Writing later (8th inst.), our correspondent adds: "According to an announcement made at the last meeting of the organising committee there are already in working order 132 Italian and fifty foreign committees, whilst the Governments which have appointed their official representatives are twenty-three in number and others are expected shortly to follow suit. Eighty-eight foreign scientific associations are now represented and the names of those medically qualified who have signified their intention to assist are more than three thousand—a number which, to judge from 'adesioni' promised but not yet formally made, will be increased to not less than six thousand. Special contributions to the agenda of the various sections, mostly taking the form of monographs, have been announced from the Rector Magnificus of the University of Berlin and Professor of Pathological Anatomy in the same seat of learning, Dr. Rudolf Virchow; from the Professor of Nervous Diseases and their Therapeutics in the University of Paris, Dr. Charcot; from the Professor of Legal Medicine in the same school, Dr. Brouardel; from the Professor of Special Pathology, Therapeutics and Clinical Medicine in the University of Vienna, Dr. Hermann Nothnagel; as well as from others scarcely less distinguished."

WITNESSES AT INQUESTS AND THEIR FEES.

AT the City Coroner's Court an inquest was held on the 7th inst. by Mr. Langham on the body of a boy who had been drowned in the Thames at Greenwich. A witness who had tried to save the deceased informed the coroner that he had lost 7*s.* or 8*s.*—a day's work—in coming to the Court and rejected with indignation the sum of 1*s.* 6*d.* tendered to him, although the coroner added a further sixpence, his fare from Greenwich and back. The witness, speaking evidently with some irritation, made a remark which called forth a stern rebuke from the coroner. Had the witness succeeded in saving the poor boy's life he would probably have been rewarded, and had he recovered the body he would have been entitled to 5*s.* in addition to the fee for giving evidence.

THE DIFFUSION OF SMALL-POX.

THE principal localities from which news reaches us as to small-pox, together with the number of fresh attacks last week, are: Birmingham, 11; Bradford, 13; Dewsbury, 4; Leicester, 4; Oldham, 11; Salford, 4; and West Ham, 14. Other places affected are Bishop Auckland, Birkenhead, Chadderton, Croydon, Hanley, Heckmondwike, Hull, Leeds, Manchester, Middlesbrough, Rishworth, Sheffield, Southampton, Sowerby Bridge, Sunderland, Thornborough and Thornton (near Buckingham), Tottenham and Walsall. In some of these places, however, the disease has been reduced to isolated cases, even Manchester having by its energetic action thus reduced the number of fresh weekly attacks, and from Halifax no new cases are reported. At Leicester the idea is gaining ground that—quite apart from the distribution of small-pox from one part of its hospital to another, such as took place some time back—the hospital is serving as a purveyor of infection to the immediate neighbourhood around it. The number of small-pox cases under isolation by the Metropolitan Asylums Board has further fallen to 350.

RENEWAL OF THE EPIDEMIC OF ENTERIC FEVER AT WORTHING.

WE referred in a recent issue to a serious epidemic of enteric fever at Worthing which had in a very brief period of time led to nearly 300 attacks. The outbreak appeared to be unquestionably due to an accidental pollution of the public water-service, and Dr. Kelly, the able medical officer of health for that division of Sussex, regarded it as a parallel instance to the Caterham case which was investigated by Dr. Thorne Thorne in 1879. As in the Caterham case, the outbreak rapidly subsided at Worthing, and, the apparent cause being at an end, the epidemic seemed also to have ceased. But we now learn that within a few weeks the epidemic has recurred, if anything on a wider scale and with more serious consequences. Already, according to local report, nearly 300 fresh cases have occurred, new ones are arising daily, and the local medical practitioners and others have applied to the Local Government Board for one of their medical inspectors to aid, in coöperation with Dr. Kelly, in investigating the circumstances anew. Dr. Theodore Thomson has, accordingly, arrived on the spot. The recur-

rence at this time of the year is one to be deplored on behalf of Worthing. That town is by no means a backward one in regard of measures such as should be applied to a public health-resort, and it has the services of one of the most distinguished of English health officers. But we cannot hesitate, under existing circumstances, to warn visitors of the danger they may incur by a residence in Worthing. It may be that the cause is an accidental pollution of water, and that the boiling of the water will prove to be a sufficient safeguard; but this recrudescence is as yet unexplained. In the meantime the Corporation and the health officer are doing their utmost to deal with the emergency.

THE MORTALITY OF CHILDBIRTH.

THE important paper of Dr. Boxall on the Mortality of Childbirth which appeared in THE LANCET of July 1st is worthy of the careful perusal of all practitioners in midwifery. He concludes from a study of such data as are available in this matter that, whereas the puerperal mortality in hospitals, especially that from all forms of puerperal fever, has greatly diminished, there is no corresponding decrease in the same kind of mortality in the country generally. An actual increase even has taken place from this cause in the provinces. Dr. Boxall attributes the difference to the fact that in hospitals antiseptic and aseptic precautions have been taken more systematically than in private practice. This is doubtless the case. The hospitals were led to this care by the high mortality and frequent outbreaks of puerperal fever, and they have more facility for the application of antiseptic measures than is always practicable in the homes of the poor. Still the practitioner of midwifery will not readily consent to be behind lying-in hospitals in their midwifery mortality, and Dr. Boxall's paper will serve to stimulate them to the use of every precaution against septic influences of every kind. The diligent use of soap and water and nail-brushes is generally practicable, and there is no excuse now for a practitioner failing to carry about with him either tabloids of perchloride, liquor iodi or other materials for an easily extemporised solution for rendering the hands aseptic. It is no part of our present intention to discuss in detail the necessary antiseptic measures—every practitioner can study them for himself; but such a study is one of his first duties and it will in the end amply repay him who carries it out conscientiously.

THE RAMSGATE MYSTERY.

A FITTING climax to the recent prosecution of Noel on the charge of having murdered his wife was the address of Mr. Justice Grantham at the Kent Assizes and the inevitable throwing out of the bill by the grand jury. We need not discuss the general bearings of the case, but there are one or two points to which we desire to direct special attention in its medical aspect. In the first place we may state that the attempt to fix the time of death by the advent and progress of rigor mortis and by the degree of coldness of the hands was, to say the least, on lines far too exclusive. Although a general average can be struck from collective observations the variations are far too numerous to exclude "philosophic doubt." When we consider that, on the one hand, so-called cadaveric rigidity has shown itself prior to total somatic death, and, on the other, that it has been delayed for twenty-four hours, it is obvious that in a particular case it is unwarrantable to apply general rules with exactitude; nay, more, it is necessary to allow a somewhat wide margin—much wider, in fact, than the medical witnesses for the prosecution admitted, since their evidence fixed the *reserve* time at something like twenty minutes. Again, as regards the coldness of the hands as an index of the time of death, it must be borne in mind that there are several factors to be allowed for: (1) It should be shown what was the habitual physiological temperature; (2) what was the actual post-mortem register at the time of observation—to fix this by the apparent difference between the object and the hand of the observer may suffice for ordinary purposes, but to elicit facts on which an indictment for murder is to be grounded or strengthened it is far too unreliable; and (3) when the hands are exposed and especially where much blood has been lost the hands quickly become cold. When it was proposed by the defendant's solicitor, Mr. Hills, to tender rebutting medical evidence by Mr. Thornton the magistrates objected unless Mr. Thornton posed as an "expert witness," and they refused to hear him even then except so far as his own personal practice and experience reached. Happily, we think, Mr. Thornton qualified as a witness by avowing himself as an expert "in a general way." The expression "expert witness" is a technical one and relates rather to the weight and value of evidence than to its admissibility. Every legally qualified medical man is an expert on medical matters. Nothing is more common in criminal and civil courts than for counsel to ask, "From your personal experience and from your reading can you say &c.," and the question is allowed by the judge. It will be understood that the foregoing remarks apply to what has so far transpired; they are not intended in any way to prejudice a case which, to a certain extent, is still *sub judice*.

PSYCHICAL CONTAGION IN SCHOOLS.

DR. REMBOLD of Stuttgart communicates to the *Klinische Wochenschrift* of Berlin a remarkable outbreak of what he calls "Psychische Ansteckung" in schools. He was quite lately called to a school for girls in the Würtemberg capital in consequence of one of the little pupils having fallen back, in an unconscious state, on the form on which she was sitting—an incident which was followed in a few minutes by others of the class fainting away, whilst others again broke out into crying and shivering fits, those who could articulate complaining of feeling very ill. The alarm and confusion arising from this strange occurrence spread to the other classes, in one of which a girl thirteen years of age manifested the same nervous symptoms which had been already witnessed in the first class. On Dr. Rembold's arrival he found amongst the forty little girls affected that ten were quite unconscious, seemingly sunk in profound slumber, a condition from which they could not be aroused, even with violent shaking and when loudly called upon by their names. Of those who retained consciousness he describes some as trembling all over, weeping and sobbing aloud, whilst others of them seemed to be dazed and terror-stricken at the sudden illness of their schoolfellows. These latter were immediately relegated to another room and the agitated ones were brought to an open window, and with every encouraging and reassuring word and deed were made to draw deep breaths of the fresh air. Those who were still in an unconscious state were brought round by strong douches of cold water and energetic appeals to them by name, after which they were sent home, whence, either later in the day or next morning, they returned to school without apparently any serious after-effects from their seizure. The interesting point in this noteworthy outbreak is the spread, as if by contagion, of the nervous or convulsive symptoms from individual to individual and from class to class—a phenomenon amply attested as having occurred in previous centuries and which has been variously classed as St. Vitus's dance in Germany and as "typhus cerebralis convulsivus" by Italian physicians. In these days the name for it is "auto-suggestive seizure," the peculiarity in the cases reported from Stuttgart being, as Dr. Rembold points out, the extraordinarily short period within which the symptoms arose and disappeared. We should have wished, however, for something like a "previous history" of an adequate

number of the little patients. We know from contemporary accounts of similar outbreaks in Germany, France and Italy that they have occurred as the sequelæ of widespread epidemics; indeed, the classic description of the choreal distemper so diffused in the fourteenth century distinctly tells us that it followed the prevalence of the "peste noire." Now, in Stuttgart influenza was, on its first appearance some two and a half or three years ago, especially severe, and left behind it traces of a very pronounced neurotic character. Dr. Rembold might, we think, follow up his investigation of the interesting phenomena he has described and ascertain how far the patients whose remarkable seizure he witnessed had been predisposed to it by the influenza epidemic, or how far their susceptibility to contract it by contagion had been determined by that cause.

A "FOYER" OF CHOLERA.

IN view of the spread of cholera the meaning of the word *foyer* requires to be defined. The French Government, it is stated, proposes to notify other countries of the existence of cholera only when a *foyer* has been created. Everything depends, therefore, on the meaning of the word *foyer*. Undoubtedly it means head-quarters or a radiating centre. The *foyer* in the house is the fireplace, where the heat is centred and radiated. In the theatre it was formerly a room used by the actors, though now the term designates the crush-room which is frequented by the public. In politics the French Government has just closed the Labour Exchange because it was a *foyer* of revolutionary agitation. In optics the *foyer* is the point in the glass where the rays of light unite. In Spain, during the great cholera epidemic, we always heard of the "focus" of the disease. Practically the use of the term *foyer* means that if there are isolated cases of cholera in a town the French Government will not notify; but if cases are grouped together and form a sort of kernel—a centre, a focus, radiating, scattering around the germs of disease,—then the French Government will notify. Of course one single case of cholera may be considered as a centre or a *foyer*. This is how the term should be accepted if notification is to be of service; but this is not the way the word is generally employed. A *foyer* of epidemic disease means practically a centre of disease. One case of cholera is no more a centre than a sentinel is an army. But the army may come where the sentinel stood, and the one case of cholera may ultimately become the centre or *foyer* of an epidemic. Instead of notifying when this one isolated case has occurred, the French propose to wait till a *foyer* has grown up around it. In that case, as already observed, the notification would come too late to be of any use and the sanitary authorities of various countries will have to rely, as in the past, on newspaper reports or on the watchfulness of the consuls. If, in this respect, the Dresden conference is to be of any service the word *foyer* must certainly be withdrawn.

THE REMOVAL OF HUMAN REMAINS FROM CITY CHURCHES.

THERE is one class of persons who are at the present time deserving of the most hearty sympathy. We refer to the clergy, churchwardens and all connected with those City churches underneath which are vaults containing human remains. During the last few years it has been found necessary to remove the dead from the vaults beneath several City churches, and only very recently allusion was made in THE LANCET to the fact that this had become necessary in St. Michael's, Bassishaw. We learn with regret that the rector, the Rev. J. Stephen Barrass, is ill, and that his friends ascribe his disorder to a too careful scrutiny of the remains beneath his church. Now it appears that St. Martin's Church, Ludgate-hill, is being put into substantial repair, that during the process of reparation it became apparent that there were a large number of bodies buried under the church, and Dr. Sedgwick Saunders, the medical officer of health for the City of London, reported that it was necessary on sanitary grounds that the bodies should be removed. Dr. Tristram, the Chancellor, has granted a faculty for the removal of the remains under the church and for their reinterment in consecrated ground. The Stationers' Company, whose garden adjoins the church, applied that the remains of 350 to 400 bodies buried in two vaults beneath this garden should be removed at the same time, but as the ground had not been consecrated the Chancellor could not grant a faculty. He suggested, however, that they could be removed by licence from the Home Secretary, and he would authorise their reinterment in consecrated ground within the diocese of London. This is very satisfactory and, indeed, it is the only proper course; but the costs will have to be paid out of the rates, which neither the churchwardens nor the parishioners will relish, whilst the question arises, which will be the next City church whose vaults must be emptied? For it is too much to expect that the proceedings at St. Martin's, Ludgate-hill, will be the last of the kind.

"SANITARY INSPECTION WITH REFERENCE TO INFECTIOUS DISEASES."

A LECTURE on this subject was delivered by Dr. Theodore Thomson on April 22nd, at the Town Hall, Huddersfield, under the auspices of the West Riding County Council, the Council of the City of Sheffield, the County Boroughs of Halifax and Huddersfield, the Yorkshire College and the Sanitary Institute, and was repeated on April 29th at Keighley. The lecture was chiefly intended for the guidance of sanitary inspectors, and in opening his subject, Dr. Thomson at once stated that he did not mean to take the term "sanitary inspection" in "any limited sense," but rather to consider all the duties of a sanitary inspector when he visits a house in which there may be infectious disease. During the course of his remarks Dr. Thomson dealt with most of the acute specific diseases, indicating the periods of incubation and quarantine and the means to be adopted for the prevention of their spread in each case. To the sanitary inspector, however, Dr. Thomson commits the important duty of investigating the cause, progress of an epidemic and the means to be adopted for limiting its spread. Nay, this important official may not only be a teacher, but he may also be a "leader of public opinion." Practically the lecturer handed over to the sanitary inspector not only the mere routine work of inspection of infected houses, but also the elucidation of important and difficult etiological problems which have taxed the ingenuity of the best disciplined minds in the medical profession. Etiology is a field which preëminently affords scope for the energy and abilities of the medical officer of health; and we feel sure, did he enter it, that he would do far greater justice to the weighty questions which demand solution.

AMBULANCE ARRANGEMENTS ON THE ROYAL WEDDING DAY.

OCCASIONS upon which great crowds of people are drawn together naturally cause a certain amount of anxiety in the minds of those responsible for their safety and well-being. In this country, at least, the arrangements are generally so good and the people themselves are so orderly and law-abiding that little concern arises in the case of sightseers. The ambulance arrangements for the civilian population who took part in the festivities were left, as usual, to the St. John Ambulance Society, the members of which performed their allotted tasks with their accustomed energy. Many circumstances combined to render the number of cases of illness and accident somewhat large, and the value of the assistance rendered by the

Society was consequently more appreciated. The public have also to acknowledge the excellence of the arrangements made by the Adjutant (Surgeon-Captain J. P. S. Hayes) who had charge of the Army Medical Staff Corps, which was nominally present for the purpose of rendering help to the 5000 Volunteers who paraded on the occasion, but who rendered great service to the spectators. At the station on Constitution Hill about 250 persons were treated, including a case of fractured radius, and several cases were taken to St. George's Hospital. At the Mall, where a second station was appointed, 300 cases were treated—as many as forty people suffering from syncope or from heat exhaustion at one time under the colonnade of St. James's Palace. The officials at the Palace supplied beef-tea and brandy and blankets for the sufferers to lie upon. An offer made to the War Office by the Volunteer Ambulance Corps was refused by the authorities. Nevertheless, when an accident occurred to the Marquis of Tullibardine, which gave rise to severe concussion of the spine, the medical officers in charge of the regular troops had to borrow a stretcher from the Ambulance Corps on which to remove the patient.

A MODEL "HOLIDAY HOME."

SWITZERLAND, which enjoys so honourable a record in education, particularly amongst the poorer classes, can also claim to be the motherland of "holiday homes" for school-children. The conception and organisation of such adjuncts to the humbler scholastic life belong to the Zurich clergyman Herr Bion, who made that city and canton the first exemplar of the institution. From Zurich the movement spread to other parts of the Confederation, and thence over the frontier to Germany, where the Empress Frederick has put herself at its head—as at that of so many other good and philanthropic works. Next to Zurich in the number and equipment of these holiday homes are the cantons of Bâle and Solothurn; but the parent city has an advantage over all its imitators in one particular. For whereas the weakly school children of Bâle and the other cantons are, during the holidays, maintained in hillside inns or farmhouses, Zurich, whilst also supporting a goodly number of such resorts, has a permanent building expressly constructed and appointed for the purpose. This is situated on the Schwäbrig Alp, half an hour's walk from the town of Gais, a well-known seat of the "whey cure." It stands some 3500 feet above the sea level; on its left rises the picturesque Gäbris, called "the Rigi of East Switzerland" and on the right is the scarcely less striking Sommersberg. The neighbourhood of a fine fir plantation adds a delicious and salubrious fragrance to the atmosphere. The site thus happily chosen is turned to the best account by the building itself; in front there is a spacious hall in which the children can go through their exercises in bad weather and also *en évidence* is the ample means of water-supply, hot as well as cold, for all purposes. Every appurtenance of cleanliness is provided, the laundry being a conspicuously attractive object. On the first floor are the sleeping apartments for the children and their teachers, in addition to which there are eight rooms which are set apart for the superintendents. Again, on the storey above, there is a second series of bedrooms, so that altogether about 110 children and twelve adults can be accommodated with every comfort and every advantage of ventilation and protection from the weather. Milk and bread, both of the best quality, are the principal articles of diet, these being reinforced from time to time by butcher's meat and by plenty of green vegetables. There is also a resident physician who, besides visiting regularly the specially appointed sick-rooms, gives a general supervision to the health and the hygienic conditions of the whole establishment. Ample means for out-door pastimes and excursions into the neighbouring woods and meadow glades are furnished—neither pastime nor excursion being practised or undertaken without the presence or guidance of the teachers, male and female. The philanthropic munificence of the citizens of Zurich supplied the means for this model holiday home, and the success of the institution is already arousing a wholesome spirit of rivalry amongst the wealthier cantons—Bâle included. Certainly Zurich was entitled to take the lead in the movement. As a great educational centre it was especially cognisant of the need of such homes for the poorer class of weakly school children, in whose case "over-pressure" has been found to aggravate the hygienic disadvantages inseparable from their humble and scantily appointed dwellings.

THE SCOTCH FORM OF OATH.

IN *Church and Queen* of the 7th inst. an article entitled "Taking the Oath" is published. As might have been expected, it deals with the subject in its religious phase and comments on the strange circumstance that in the taking of oaths Scotland should set England an example of greater reverence. Whilst acknowledging the reference made by our contemporary to what has appeared in THE LANCET, we must in turn express our satisfaction that the subject is receiving the attention of the ecclesiastical press, since allusion was made to the new form of oath in a recent issue of *Church Bells*, for whilst our remarks have naturally been concentrated on the dirty and risky practice of kissing a Bible or Testament in common use, we have no wish to ignore the religious aspect of oath-taking. On the contrary, we have expressed our satisfaction that few, if any, members of the medical profession have declined to take the oath on the grounds that they had no religious belief. It is most important that every medical witness should be solemnly impressed whenever he takes an oath. The new form is admirably calculated to make him do this, the uplifted right hand being an act which is more solemn as well as more ancient than the kissing of the book; whilst, unlike the latter process, it cannot be evaded, but is plain to everybody in Court. It is true that medical evidence is as a rule formal and that medical witnesses have no object in telling anything but the truth. It is impossible, however, to make any distinction, and at a recent trial the Prince of Wales was sworn like any other witness. Medical witnesses, moreover, must set an example *pour encourager les autres*. To all the sanctity of an oath and due reverence to Him in whose name it is taken is a matter to which attention should be drawn; and we emphasise our contemporary's hope that the subject of reverent adjuration may form the subject of sermons and discourses from every pulpit as well as of leading articles in every religious paper.

THE CRIME OF PROCURING ABORTION AND ITS PENALTIES IN ENGLAND AND OTHER COUNTRIES.

THE Parliamentary return asked for by Viscount Grimston and already alluded to in THE LANCET contains answers to the following question (No. 7): What are the penalties for criminally causing a child to be stillborn? The replies will be read with interest, since from various causes and reasons this crime of procuring or attempting to procure abortion has of late years become unhappily frequent. As is well known, in England and in Ireland the punishment is penal servitude for life, or for any less term, or imprisonment; whilst if the mother of the child should die in consequence of this unlawful act the crime becomes constructive or legal murder. In 1875 Alfred Thomas Heap, a Manchester abortionist, was convicted of the murder of a woman. He had used a Manchester spindle, with which he had transfixed the gravid uterus. He was found guilty, but was recommended to mercy by the jury. As, however, they were unaware that he had

already served five years' penal servitude for procuring abortion the recommendation was disregarded and he was executed. Since then there have been many convictions and heavy sentences, but still the crime goes on. In Scotland the punishment is arbitrary; in France, Spain, the German Empire, Austria, Hungary, Italy, Russia, Norway, Sweden and Denmark—in short, throughout the whole of Europe—the crime is punished with imprisonment for from six months to twenty years or for life. In Sweden the penalty is death if the mother dies, and in Russia the mother, if a consenting party, may be exiled to Siberia; in the Dominion of Canada the penalty is imprisonment for life; in Nova Scotia, Quebec, Ontario, British Columbia and in Prince Edward Island it varies from imprisonment for two years to for life; in New Brunswick the penalty is death; in Australia and New Zealand the punishment is very severe, ranging from two years' imprisonment to penal servitude for life; in the United States it is punished with fines ranging from 100 to 5000 dollars, with imprisonment for long periods and with death: so that in all parts of the civilised world this crime is regarded as a grave one and is punished with more or less severity. Every medical practitioner who may have the opportunity of doing so should aid in bringing to justice the miscreants, both male and female, who live and thrive on this abominable trade, too often at the risk of the lives of the unhappy women who resort to them.

THE WRECK OF THE "VICTORIA."

THE following passages are taken from a letter which has been received from an officer who was on board H.M.S. *Victoria* at the time of the unfortunate disaster. It will no doubt prove of interest to our readers:—

"I should have written to you before, but no doubt you have seen in the papers a full account of what took place, and I can add very little to it. The non-commissioned officers and men behaved splendidly. After the water-tight duties were over they fell in by watches on the quarter-deck, port side, and there stood steadily and firmly to the last, ready for anything and were the admiration of the fleet. In talking of the Marines I do not wish you to imagine that the blue-jackets were behindhand; the men stood as if on parade without caution. The ship began to sink forward, gradually advancing on the port, then she gradually rolled over to starboard, and after two lurches rolled over. The thing was sudden. The order to move and save themselves was not given until the second lurch. I went over the port side. Farquharson behaved very well and when the boats came to pick him up he refused to get in until there was not another man to be picked up. Sergeant Moran was picked up under a cutter which came up capsized. He was found under it, his white tunic having been caught by something. My servant was seen swimming all right and may have been caught by someone or hurt as many men were. I scarcely realised that there was much danger as we were going ahead till the end came—that is, the screws were going round. The Admiral, I believe, had hopes of taking us into shallow water. The *Dreadnought's* boat picked me up. Dr. Ellis, the Fleet-Surgeon, did his best to save a sick midshipman and nearly exhausted himself. It appears that a good many of the Marines could not swim properly.

"There was the first going down as she went over, the second as she rolled over, then as she sank, and afterwards the disturbance of the explosion or bursting up of the boilers. No doubt many were dragged down by others as we rose in crowds or groups. The wreckage damaged many and exhaustion others. They say some were killed as the second screw rose. The port screw was out of the water well before the final lurch. Many of the escapes were most extraordinary. One of our men's legs went through the scuttle and he was carried round as she capsized and then thrown clear. One blue-jacket in the fighting-top swung himself clear as the top came to the water. The captain, the Hon Maurice Bourke, had only been up a few moments on the bridge and he was carried over in the capsize and thrown clear. One midshipman was carried down a funnel which had broken off by the rush of water. Wonderful statements have been made about the various things which took place, but we can scarcely believe all. The survivors, of course, have lost everything. I believe all took place in ten minutes and a half, according to the time the watches stopped. I cannot say too much or enough for the men. We buried Sergeant Moran and others next morning. I do not feel much heart for continuing in the service; one will always feel such a loss. It was awfully grand, but most terrible and sad. Captain Bourke had a touch of fever simply due to the state into which he was thrown by the accident. The poor fellows behaved like heroes throughout the most trying time. I never believed it would be so sudden at the end, but the close was too awfully sudden. Out of ninety-six officers and men in the Marines there were sixty-eight men lost."

SUDDEN OPHTHALMOPLEGIA.

AN unusually interesting case is recorded in the *Boston Medical and Surgical Journal* by Dr. Cheney. A young woman of thirty-three, ten days after her confinement, was seized with sudden and severe pain in the right side, temple and forehead. The eye soon became red and the lids swollen and on the following morning there was inability to raise the lid or move the eye in any direction. Five days later a similar pain was experienced in the left side, followed by the same condition of the right. In both eyes the sight was impaired. There was nothing in the previous history of the patient to suggest any explanation. Three weeks after the onset ptosis occurred on both sides and there was complete immobility of both eyeballs. The pupils were moderately dilated and reacted sluggishly to light. There was slight exophthalmos, which was more noticeable on the left than on the right side. The conjunctivæ were injected and the lids œdematous on both sides, though more so on the left. Vision was considerably impaired and both discs were injected, but the edges were not obliterated. The headaches continued for several weeks, but gradually disappeared. Iodide of potassium was freely administered. A noise as of the puffing of a steam-engine was complained of, and it was subsequently found that a loud systolic hum was quite audible all over the head. Improvement gradually set in after a considerable portion of the œdematous conjunctiva had been removed, the ptosis almost disappeared and the ocular movements of the right eye were nearly normally free in all directions. On the left side there was persistent internal strabismus owing to paralysis of the external rectus. The left pupil was larger than the right and quite inactive to light. The discs were somewhat pale, but the fields of vision normal. The humming murmur in the head remained unaltered, being best heard in the temporal regions and behind the ears, and rather more distinctly on the left side. It was most imperfectly heard over the longitudinal sinus. The nature and site of the lesion are discussed in the paper, but no definite conclusion as to either the one or the other is arrived at. We would suggest as a feasible explanation that the lesion was one of thrombosis of the cavernous sinus.

FOREIGN UNIVERSITY INTELLIGENCE.

Königsberg.—Dr. Meschede has been appointed to the newly established Extraordinary Professorship of Mental Diseases.

Leipsic.—Dr. von Frey, First Assistant in the Physiological Institute, has been promoted to an Extraordinary Professorship.

WE understand that Sir Joseph Lister has intimated his intention of relinquishing the charge of beds at King's College Hospital at the conclusion of the present session and that Mr. A Boyce Barrow's services will in consequence be transferred from the out-patient department to the clinical wards.

THE annual prize distribution will take place at Epsom College on Founder's Day, July 31st. The Right Hon. Lord Ashcombe will address the school, and the band of the 2nd V.B. East Surrey Regiment will be in attendance.

IT is announced that the Queen has conferred the honour of knighthood on Francis Henry Laking, M.D., M.R.C.P. Lond., Surgeon Apothecary to Her Majesty.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.—A business meeting was held on June 6th, Dr. J. H. Bell, President, in the chair. A donation of ten guineas was voted to the British Institute of Preventive Medicine. Various alterations were effected in the rules for the purpose of more effectively dealing with the communications, which are increasing in number and importance. The average attendance at meetings exceeds twenty-five. The report was adopted and the following officers elected for the ensuing year: President, Mr. J. Appleyard; Vice-president, Dr. S. Johnstone; Council, Messrs. Major, Mercer, Horrocks, Honeyburne, Berry and Arnold-Evans; Secretary, Dr. Hermann Bronner; Treasurer, Dr. D. Goyder; Pathologists, Dr. Major and Mr. Chapman; Librarians, Messrs. Althorp and Chapman.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE JUBILEE OF THE FELLOWSHIP.

THE annual meeting of the Fellows of the Royal College of Surgeons was held in the theatre of the College on July 6th, at 1 P.M., when the address was delivered by the President, Mr. Thomas Bryant. There was a good attendance in the theatre, about one hundred Fellows being present, and the address, which we published in THE LANCET of last week, was listened to with much attention. At the close of the address Sir G. M. Humphry rose to propose that a congratulary address should be forwarded from the College, in such terms as might be thought most fitting to the Council, to the Prince and Princess of Wales on the great and auspicious event of the day, the marriage of the Duke of York and the Princess May. Mr. C. Steele, in seconding the resolution, referred to the importance of the occasion and the interest the event excited in those of British race. The resolution was carried unanimously and the President stated that he would convey the wishes of the Fellows to the Council at their meeting on the following day, and the Council would doubtless carry out with entire cordiality their loyal wish.

The festival dinner in celebration of the jubilee was held in the Whitehall-rooms of the Hôtel Métropole at 7.30 P.M. on the same day. Sir James Paget, Bart., was in the chair and was supported by the President of the College on his right and by Sir Richard Quain, Bart., on his left. The usual loyal toasts were given after the dinner. The Chairman then proposed "The Navy, the Army and Reserve Forces," to which Mr. J. N. Dick, C.B., the Director-General of the Navy, replied, making feeling allusion to the recent loss of the *Victoria*. During the course of his speech he read a letter from Fleet-Surgeon Ellis, who was on board at the time of the collision, in which a most graphic account was given of the accident and of the subsequent scene. Surgeon-General Marston, C.B., who replied for the army, alluded to the wonderful advances which have taken place in the medical department of the service during the past fifty years. "The Jubilee of the Fellowship" was proposed by Sir James Paget, one of the original Fellows of the College, and was responded to by Sir G. M. Humphry. Sir T. Spencer Wells, Bart., proposed "The President of the Royal College of Surgeons of England," and Mr. Thomas Bryant, the President, replied. The toast of "The Guests" was proposed by Mr. Lund, Senior Member of the Council, in the absence of Mr. Jonathan Hutchinson, and was responded to by Sir Richard Quain, who also proposed "The Chairman." Sir James Paget, who was enthusiastically cheered, in reply drew attention to the omission of any mention of the secretaries in the toast list, and ended his speech by proposing their healths. Mr. Willett and Mr. Braine replied. Altogether about 138 were present, including the guests, amongst whom were Sir Richard Quain, the Director-General of the Navy, Professor Charles Stewart, Mr. Edward Trimmer, Mr. Hallett, Mr. Cowell, and Mr. Bailey, librarian. During the course of the dinner a book was sent round and the autograph of each person present was obtained for preservation in the library of the College.

COUNCIL MEETING: ELECTION OF PRESIDENT.

A quarterly meeting of the council of the College was held on Friday, the 7th inst., Mr. Thomas Bryant, President, in the chair.

The President reported the result of the meeting of Fellows held on the preceding day for the election of members of the council. Mr. Macnamara and Mr. Pemberton were declared re-elected, Mr. Mayo Robson as elected to the vacancy caused by the resignation of Sir W. Savory and Mr. Henry Morris to the vacancy caused by the death of Mr. Marcus Beck (Mr. Morris therefore retires in rotation at the end of five years). The new members were admitted and took their seats.

The minutes of the ordinary council held on June 8th were read and confirmed.

Mr. Bryant reported the resolution passed at the meeting of Fellows, and the council unanimously agreed to the resolution that a congratulatory address should be presented to the Prince and Princess of Wales, on the marriage of the Duke of York and the Princess May.

Sir W. Turner was introduced and after signing the by-laws and making the required declaration was admitted a Fellow of the College.

Mr. Willett moved, and Mr. Tweedy seconded, the following resolution, which was, however, rejected by sixteen votes to seven: "That in the opinion of this council it is desirable that no one who has been elected a member of the Court of Examiners shall at the expiration of his period of office be eligible for immediate re-election, but that this resolution shall not apply to the existing members of the Court of Examiners."

Mr. Rickman J. Godlee was elected a member of the Court of Examiners in Surgery.

Mr. J. H. Mummery was elected a member of the Dental Section of the Board of Examiners in Dental Surgery.

The council then proceeded to the election of professors and lecturers for the ensuing year as follows:

Hunterian Professors of Surgery and Pathology: Thomas Pickering Pick (subject not stated); William Thorburn (the Nature and Treatment of Injuries to the Spinal Column and the Consequences arising therefrom); Raymond Johnson (Tumours of the Breast); Edward Treacher Collins (the Anatomy and Pathology of the Eye). Professors of Comparative Anatomy and Physiology: Charles Stewart (subject not stated); Charles Bagge Plowright (the Fungus Kingdom). Lecturer on Anatomy and Physiology (Arris and Gale): Ernest Henry Starling (the Physiology of Lymph Secretion). Erasmus Wilson Lecturer: James Henry Targett (on Some Interesting Additions to the Pathological Department of the Museum).

It was agreed by the council, on the recommendation of the Committee of Management of the two Colleges:

1. That the following clause be added to Section 3 of the regulations bearing date Oct. 1st, 1884, and a corresponding clause to Section 3 of the regulations, dated Jan. 1st, 1892: Any Doctor or Bachelor of Medicine or Surgery of an Indian or Colonial University, recognised from time to time for the purpose, who shall have passed such an examination or examinations at his university as shall comprise the subjects of the first and second examinations of the Examining Board in England, will be eligible for admission to the third or final examination of the Board two years after his having passed the said examination or examinations; any candidate so admitted will be required to pay a fee of fifteen guineas. Any such candidate who shall have passed the third or final examination shall, on further payment of not less than twenty guineas and subject to the by-laws of each College, be entitled to receive the licence of the Royal College of Physicians of London and the diploma of the Royal College of Surgeons of England. For the present the following Universities will be recognised: Bombay, Madras, Melbourne, Sydney, Adelaide.

2. That the committee be authorised to let the rooms and lecture theatre in the examination hall buildings for such purpose and at such charges as they may think desirable.

3. That the course of laboratory instruction in Public Health for the diploma held in the medical school of St. Mary's Hospital be recognised by the two Colleges.

4. That the following institutions be recognised: As a general hospital, the Glamorganshire and Monmouth Infirmary, Cardiff; as an ophthalmic hospital, the Southampton Eye and Ear Hospital; as a fever hospital, the Corporation of the City of Birmingham Fever Hospital; as lunatic asylums, Cane Hill, Claybury, Colney Hatch and Hanwell.

5. That the following synopsis in Practical Chemistry be accepted for the examination in that subject:

Identification of substances included in the following lists:

INORGANIC.

Metals.—Sodium, potassium, ammonium, calcium, barium, magnesium, zinc, iron, aluminium, copper, silver, lead, mercury, bismuth, antimony, arsenic.

Acids.—Hydrochloric, hydrobromic, hydriodic, nitric, carbonic, sulphuric, phosphoric.

The metals may be present as metal, oxide, sulphide, or as a simple salt. The acids hydrochloric, nitric, sulphuric may be present in the free state.

ORGANIC.

Acetic, oxalic, tartaric and hydrocyanic acids and their salts, with potassium, sodium and ammonium; cane and grape sugars; urea.

Candidates will be required to give equations illustrating the chemical reactions involved in testing for the above substances and, if requested, to explain the same.

Preparation of one of the following compounds: Chloride of sodium, of ammonium or of lead; iodide of lead or of

mercury; oxide of copper or of mercury; hydroxide of sodium or of copper; carbonate of sodium, of calcium, of magnesium or of bismuth; oxalate of ammonium; oxalate of urea; nitrate of potassium, of barium or of lead; phosphate of calcium or of iron; sulphate of sodium, of calcium, of magnesium, of zinc or of copper.

Candidates will be required to exhibit to the examiners the preparations which they have made and to represent by equations the reactions involved.

A letter from Dr. E. Liveing was read reporting the proceedings of the Royal College of Physicians, more especially the appointment of delegates to confer on the subject of the Johnstone Scholarships and the appointment of trustees of the sinking fund for the examination hall buildings.

It was agreed to accept a cast of a bust of Carpue by Thomas Woolner, R.A., offered by Mr. F. G. Stephens.

Mr. John Whitaker Hulke was elected President of the College in succession to Mr. Thomas Bryant. Sir W. MacCormac and Mr. Macnamara were appointed Vice-Presidents.

The Pathological Curator, Mr. J. H. Targett, and the Anatomical Assistant in the Museum, Mr. R. H. Burne, were re-elected.

The members of the various committees were then elected.

The next meeting of the council will be held on the 27th of this month.

THE ANNUAL EXHIBITION OF SPECIMENS ADDED TO THE MUSEUM.

We learn from the report of Professor Stewart that the work of the Department of Pathology during the past year has been carried out upon the plans previously adopted. An increasing amount of pathological material has been received in the workroom and each year there has been an additional number of medical practitioners who have availed themselves of the privilege accorded by the College of sending specimens to be dissected, examined and reported upon by the pathological curator of the museum. From this material a selection is made for the purposes of preservation, and all preparations of which no adequate clinical history can be obtained are rejected with very few exceptions, such as those exhibiting rare lesions or where the information intended to be conveyed by the specimen is complete in itself. In this particular the additions of late years compare very favourably with those of the past; for, though the later specimens not unfrequently display a pathological condition which in the main is similar to that already represented, yet the clinical notes with which they are accompanied, together with the reports of their minute structure, are such valuable contributions to their interest and usefulness that the above statement does not need defence. The occasional mounting of duplicate preparations may be further justified by the consideration that in a future edition of the pathological catalogue probably those specimens only to which a full description is attached will be retained.

The donations of the past year have been all carefully examined and their descriptions and histories will form Appendix VII. to the pathological catalogue of the museum. Amongst them several which are specially worthy of attention may here be indicated:—

Symmetrical gangrene of the toes attributed to Raynaud's disease, but the patient, a woman aged twenty-five, had been in the habit of eating rye-bread for twelve years, so the cause is open to question.

Epithelioma of the foot arising in the ulcerated scar of a gunshot wound inflicted fifty years previously. It was supposed that many shots were retained in the wound and that healing was thus prevented.

The bones of the leg from a remarkable case of hydatid disease, in which the femur was reduced to a mere shell filled with cysts. The limb was amputated for supposed ununited fracture and from the cut end of the bone there was a flow of cysts and liquid which came from the upper part of the thigh, the osseous shell acting like a water-spout. From a case under the care of Dr. Carline.

Sarcoma of the knee-joint affecting and apparently originating in the capsular ligaments. The clinical features were at first those of chronic synovitis with effusion, but subsequently the joint became much enlarged and its outline lobulated.

A tumour removed from the left half of the soft palate, which is of interest because it was accidentally discovered as a swelling behind the angle of the jaw. Its histological structure closely resembles that of the common parotid tumour.

Examples of symmetrical thrombosis of the renal veins, which caused death by embolism of the pulmonary artery. In both organs blood was effused into the pelves and ureters and on the right side the clot extended down to the bladder and projected as a solid cylinder from the vesical orifice of the ureter.

A sarcoma—of a child's bladder—which fungated through the wound made by a supra-pubic cystotomy and formed a large sloughy tumour on the abdominal wall. The appearances are well represented in a coloured drawing.

A remarkable ulceration of the glans penis occurring in a man of thirty. It began as a "soft sore" and gradually extended. During two years it was subjected to various forms of treatment with the view of inducing cicatrisation. Excision of the organ and its crura was followed by a rapid recovery. On microscopical examination the ulcerated surface appears to be covered with granulation tissue only, but sections of enlarged glands from the inguinal region contain nodules of epithelial cells like those of an epithelioma. The patient was under the care of Mr. Lunn.

The microscopical sections of these and many other specimens that have been made during the past year will be placed in the cabinet, where they will be available for purposes of study. Advantage is also taken of the opportunity for examining old specimens which from time to time occurs when remounting is required. Thus many tumours have been examined, and in not a few instances the information so obtained has thrown a very different light on their pathological appearances. Records of these investigations will be preserved, so that they may be incorporated in a future edition of the catalogue.

The additions made to the Department of Human and Comparative Anatomy are especially directed to complete as far as possible the earlier sections of the physiological series and to bring together some examples which will serve to illustrate the facts and theories in physiology and biology that have lately attracted attention.

With this view a large number of admirable preparations of the muscular system have been made, of the lower forms by Mr. Burne and of the higher by Mr. Pearson.

A 3737 to A 3737*c*, presented by Professor Wood-Mason, show the peculiar mode of nutrition of the embryo of a Ray (Pteroplatæa micrura), lately described by him.

Professor A. Stuart has made a most interesting donation (3792 D *a*) illustrating the symbiosis between an ant (Iridomyrmex cordatus) and a plant (Myrmecodia), the lower portion of whose stem forms a natural formicarium in which the ants dwell, never forming a nest for themselves.

Mr. H. O. Forbes has sent the original specimen, described and figured by him, of a remarkable spider's web which, with the spider, so closely resembles birds' dung as to allure butterflies.

There is also a unique specimen of the train of a peahen which had assumed male characters, presented by Mr. Douglas.

CHOLERA.

CURRENT NOTES, COMMENTS AND CRITICISM.

THE outbreak of cholera at Mecca proves to have been far more serious than has been hitherto represented. With the departure of the pilgrims the disease has, of course, decreased at Mecca and Jeddah; still, the deaths at these places, according to the latest intelligence, amounted to about 250 a day. The total number of fatal cases at Mecca since June 7th is stated to have been over 7000, and at Jeddah, since June 29th, 1450; but according to the delegate from the Egyptian Quarantine Board, as reported by *The Time* correspondent, the deaths from cholera far exceed the number officially declared. In the Valley of Mouna it became impossible to bury the dead, and the road between Mecca and Mouna was strewn with corpses. In Mecca it was found impossible to execute the orders for interment with proper expedition and without serious delay. Strict regulations are being carried out in Egypt in regard to the pilgrims and fifteen days' quarantine at El-tor have been imposed by the quarantine board. The earliest arrivals have brought cholera with them, and there have been numerous deaths

on board the vessels carrying pilgrims, as well as at the quarantine hospital at El-tor. As many as 50,000 pilgrims in all are expected, but El-tor is only capable of providing accommodation, provision and water for 11,000 persons at a time. Any pilgrims in excess of this number will have to remain on shipboard, as they can neither land on Egyptian territory nor pass through the Suez Canal before performing fifteen days' quarantine at El-tor. It is reported that the Egyptian Government is doing its utmost to protect Europe from cholera and confidence is expressed in what is being undertaken in this direction. We would venture to remark, however, that the state of things which is likely to ensue at El-tor is not very reassuring if large crowds of cholera-stricken pilgrims are to be detained there with all the concomitant disadvantages of overcrowding, dirt and insufficient or bad food, to say nothing of the depressed and fatigued state of the unfortunate pilgrims themselves, rendering them very susceptible to any epidemic disease. It would seem to us that all the factors necessary for the rapid development of the disease would be present and brought to a focus, as it were, at El-tor under such circumstances. As to the protection of Europe against cholera infection it appears to be a somewhat superfluous proceeding to attempt to protect it against a disease which is unfortunately already there. There were indubitably two sources of cholera in existence in Europe last year—for example, one in France near Paris and afterwards at Havre, and later the epidemic at Hamburg, which came *viâ* Persia and Russia. We have already on more than one occasion dwelt upon the great importance of something being done as regards these Mussulman pilgrimages to guard against the recurrence of epidemics of cholera, as at present all the conditions for the spread and development of epidemic disease exist in the holy places of Islam, and nothing short of a thorough reform of their sanitary arrangements is likely to effect any good. When the evil has already arisen and attained a permanent hold on the enormous masses of pilgrims at Jeddah and Mecca it is surely too late to apply such a doubtful and inadequate remedy as rigid quarantine at El-tor, where the conditions—on almost any assumption as to the spread of this disease—are rather calculated to foment than abate its prevalence. There is, in truth, no royal road and no short cut to the desired end. If the experience we have had of cholera in this country and India, even of an empirical kind, be true, it indicates that reliance can only be placed on thorough and effective sanitation, and that to crowd human beings together in lazarettos or buildings or on shipboard during a cholera epidemic is simply a ready way of making hotbeds for the development of the disease amongst these unfortunate people. The effective method of procedure under such circumstances is the opposite of this—viz., the separation and isolation of the sick and the spreading out, dispersion and aeration of the healthy to the utmost extent practicable.

We hear but little of the progress of cholera in Russia, but the disease appears to have been more prevalent of late in Moscow and to have given rise to some anxiety and apprehension there. It reappeared in that city about June 30th and thirty-two cases and eleven deaths have since taken place. The first outbreak arose in the convict prison. Several cases of cholera have also occurred recently at Kieff. We should not expect to hear of the reappearance of cholera on a large scale at those places where it prevailed with epidemic intensity last year, for cholera does not, as a rule, pursue a retrograde course; but its renewed vitality and manifestation at some places, and especially its invasion and distribution in others, are points of much epidemiological interest at the present time. According to the last weekly official report there were 310 cases of cholera and 100 deaths in the province of Podolia during the seven days included in the report; in Bessarabia 35 cases and 15 deaths; in Orel 32 cases and 12 deaths; in Kherson 18 cases and 9 deaths; and in Toula 8 cases and 3 deaths. The public health and sanitary condition of St. Petersburg are said to be satisfactory.

From Berlin we learn that great preparations have been made in Germany for combating the disease in the event of any second visitation in that country. The service of watching over the rivers, notably the Vistula, and the river traffic has been already taken up; bacteriological stations have been increased or fresh ones established and a number of bacteriologists have been added to the existing staff to act in concert with the various local authorities. But so far there has been little cholera or choleraic disease in the country during this year.

From Vienna it is reported that there have been some cases of choleraic disease in the Hungarian town of Szathmar and several suspicious cases at Dees in Transylvania. Sporadic cases of cholera are also reported from Budapest as having occurred in Bereg and in the counties between the Theiss and the eastern frontier and in northern Transylvania.

In France, where the disease is pretty widely distributed, if we may judge from the occurrence of sporadic cases in different parts of the country, and where cholera of a mild type is persistent rather than actively progressive, there have been a few cases at Toulon, Marseilles and other towns and villages.

From Madrid we learn that two cases of cholera had occurred on board the British steamship *Dante*, which was undergoing quarantine because she had come from Marseilles. A fatal case has also occurred at the district hospital and a suspicious case at the military hospital, Madrid, in the person of a soldier of the marine infantry, has been recorded. It may be mentioned that although Madrid has an elevated position and an excellent water-supply, taken from a mountain stream at a considerable distance from the city, it nevertheless suffered severely from cholera in 1885. The sewerage and house connexions in Madrid are very defective and unsatisfactory, and these tend to annul or reduce considerably the beneficial effect of the other conditions. Madrid has generally a high death-rate.

The steamship *Widdrington*, which touched at St. Louis-du-Rhône, a cholera-infected port, on June 6th and left fourteen days later, had, it will be remembered, several cases of illness on board, and two fatal cases of cholera. The ship was detained by the Cardiff sanitary authorities for disinfection. The crew, consisting of twenty-one hands, are well and the port is free from disease.

CHOLERA AND SANITATION IN HOLLAND.

(FROM OUR SPECIAL CORRESPONDENT.)

How the Cholera came to Holland.—Cholera by Rail and by Water.—The Dutch Law on Epidemics.—Compulsory Notification and Publicity in Holland.—The Dutch Medical Officers of Health.—Sanitary Law affecting Navigation.—Centralisation of Sanitary Service.

IN spite of the cleanliness for which the Dutch are renowned our maritime relations with Holland are attended with considerable risk to ourselves. Holland is honeycombed by innumerable canals, which place the interior of the country in communication with the shipping of these ports, and in the event of a cholera epidemic it would be impossible to prevent the contamination of these numerous waterways; indeed, this was the history of the outbreak of cholera that prevailed in Holland last year. The epidemic fortunately was not severe, but it was widespread. It seemed as if the infection had been scattered all over the country by means of the canals, but fortunately other circumstances were apparently unfavourable to the development of the disease, so there were very few cases. In round numbers there were 400 cases and 200 deaths from cholera. The first cases were noted in August; they came both by land and by sea. There was the *Jason*, bound from Hamburg to Rotterdam, which entered the Maas with dead and sick on board and was not allowed to go up as far as Rotterdam. The crew were placed in isolation huts. There were a dozen persons ill and under treatment for ten days and three deaths occurred. The ship was of course thoroughly disinfected and the water and bilge were changed. Soon after another ship, the *Maas*, arrived with her captain sick from cholera, and two or three other ships followed, also with cases on board. Precautionary measures were taken and no direct case of infection was noticed; but some time after there were isolated cases of cholera in different villages on the banks of the Maas. It seemed as if the water of the river had been contaminated by dejections from the ships before the patients could be removed from them. This is one of the great difficulties of such inland ports, as, for instance, Antwerp and Rotterdam. Ships may contaminate the river before it is possible to remove the sick. Whilst cholera invaded Holland by the sea there were at the same time cases that came overland by train. At Groningen, at the Hague and in Harlingen travellers from Hamburg fell sick, being for the most part Jew immigrants. Such cases were treated with the utmost rigour. The first case at the Hague was that of a Jew who took lodging in a quarter

where there was a great number of children. As soon as it was known that he was suffering from cholera he was taken to the hospital, and all his neighbours were placed in a sanatorium under observation. The dejections, the clothes, blankets, bedding and all that had come in contact with the sick man were burnt. A big poster with the word "Cholera" written on it was hung up outside the house and the police were stationed there to warn people away. Two other strangers were seized with cholera whilst at the Hague, and the same precautions were taken. No regular inhabitants of the Hague contracted the disease, this being successfully prevented by the sanitary authorities; but cholera continued to extend up the river Maas against the current till it reached Dordrecht. The epidemic travelled right round from the Rotterdam branch of the Maas inland to Dordrecht, and then back towards the sea by the Lower or Oude Maas; but from Dordrecht, by the river Leck and by canal, cholera also reached Ysselstein and Utrecht to the north-east and Leyden to the north-west. At Ysselstein there were some twenty and at Utrecht some fifty deaths. The Yssel and the Rhine, connected with infected towns by means of canals, were also in their turn contaminated. Thus along most of the water-courses and canals of the central and southern portions of Holland there were cases of cholera, which spread from Dutch villages and Dutch towns, never causing any serious epidemic, but manifesting itself in a great number of places. In the north of Holland cases of cholera, brought by railway passengers, occurred at Groningen and Harlingen, and by sea the cholera reached Ymuode, at the entrance of the Amsterdam canal, and Amsterdam itself. To sum up the position, it would seem that the cases imported by railway were satisfactorily dealt with and did no great harm; but, on the other hand, the cases brought by sea seem to have infected, first the rivers, then the canal and finally to have spread the disease over a large area. The sanitary authorities in Holland cannot attribute the spread of cholera to any other cause than the water. Those who suffered from the malady were all residing on the banks of rivers or canals, or were living on board boats or barges. The Calvinistic fatalism of a great section of the population made it difficult to persuade the people not to drink water likely to be contaminated. In some communes the people refused to take any precautions. The weather also was so exceptionally dry that it was not possible to cleanse the canals.

Nevertheless, and in spite of these difficulties, the authorities in Holland are well armed in their struggle against such epidemics. First and foremost, they have the inestimable advantage of dealing with a population that thoroughly understands and practises the virtue of cleanliness. Then there are good laws and an intelligent desire to see them effectually applied. Sanitary authority is concentrated in the hands of the Minister of the Interior. Dr. W. P. Ruysch is the medical councillor and chief of the sanitary department of his administration. The Government appoints eight sanitary inspectors, one for each of the eight provinces. In England we should call these functionaries "medical officers of health." They must be medical men, but they are required to give up all private practice. They are nominated by the Crown and receive from £340 to £400 from the Ministry of the Interior. These eight medical officers of health act as the presidents of the eight provincial sanitary councils. The membership of the sanitary councils is an honorary function. The members are doctors of medicine, chemists, professors, and there is generally one lawyer. The law compels the sanitary councils to meet at least twice a year. Each member of these councils has individually the right and the duty to watch over matters relating to the preservation of public health. They may even enter factories, though for the prevention of accidents in factories there is a special law and there is also a special set of inspectors. The Crown nominates three factory inspectors, who are either chemists or engineers. Then the Crown appoints eight veterinary inspectors, who, like the medical officers of health, are forbidden to practise. Each veterinary inspector has under his orders five or six sub-inspectors, who watch local markets, and who are also paid by the State; but as the latter receive only a small sum they are allowed to have private practice. Finally, the Crown appoints two inspectors for lunatic asylums. There are in Holland twenty asylums containing about 8000 patients, and there are besides these 4000 patients living in villages under special surveillance. There is only one State asylum, all the others being either provincial or private asylums. The two State inspectors receive £400 a year each and have to inspect every establishment, including the cottage homes.

The eight medical officers of health meet at least once a year at the Hague and hold a conference under the presidency of the Minister of the Interior. The principal laws under which these medical officers act are, firstly, the Law on Epidemics, which bears the date of Dec. 4th, 1872. According to this law both the medical attendant and the parents or relatives must report all cases of zymotic disease. Secondly, the law that organised the sanitary services, which dates from 1865. Then there is the law of March 28th, 1877, governing the inspection of ships arriving at Dutch ports, and the law of April 26th, 1884, which establishes that, in case of an epidemic prevailing in any part of the world, the importation from the infected place of rags, skins, bedding and dirty objects may be prohibited, and that measures may be taken to isolate and disinfect dangerous objects and persons. Various Royal decrees have from time to time elaborated these laws and settled matters of detail. The law on epidemics, that of Dec. 4th, 1872, is the most important. Without, however, attempting to analyse in detail each of these legislative enactments, it results therefrom that, according to Dutch law, the burgemeester or mayor is held responsible for the health of his commune. He may do whatever he considers to be necessary to cause the streets to be cleaned, to disinfect contaminated premises, to evacuate unwholesome buildings and to provide suitable drinking water. It is very important to note that the mayor is appointed by the Crown. He is not elected—he is not even a member of the municipal or communal council; in fact, he seems to be more like a prefect than a mayor. The medical officer of health advises the mayor and the provincial council, and also transmits to the central government at the Hague details as to the advice he has given. The Government then makes inquiries, and if it is found that the advice of the medical officer of health has not been followed, and if there is no good reason for this neglect, note is taken of the fact and the mayor is not reappointed. As the appointment of mayors is made every five years the Government is able to dispense with those who do not give satisfaction.

In one important respect the Dutch law is somewhat weak. If a person living in a house that is in an insanitary condition contracts an infectious disease he can only be removed if he is in a hotel or is a lodger. In Holland, even in the large towns, there are innumerable small houses where poor people live in a crowded, miserable manner; but they are in their own houses and cannot be treated as tenants. Though it is most essential that persons suffering from an infectious disease should be removed from such cottages the law does not render their removal compulsory. The people have to be persuaded and money has to be given to them before they will allow their sick relatives to be isolated in a hospital. According to the law each commune should have an isolation or fever hospital, but very small and poor communes are allowed to unite together so as to have one hospital between them. The mayor has to decide how patients are to be removed to the hospital and to give directions as to the disinfection of the premises &c. If an infected person lends or sells clothes which he has contaminated, or by any imprudence or negligence causes another person to be infected, the law sanctions the infliction of a fine of from 5 to 25 florins and three days' imprisonment. In cases of death from infectious disease the mayor may order the immediate removal of the body and the law demands that there should be a mortuary in every cemetery. The medical officer of health has to notify whenever an epidemic prevails. Having received this notification the mayor is obliged to at once announce the fact from the town-hall. Every day the number of cases and deaths must be published in the *Gazette*. Fairs and *fêtes* are then postponed till the epidemic is over; but if there is only one case of cholera, and without waiting for an epidemic, the mayor must proclaim the fact from the town hall and publish the announcement in all the newspapers. Every day the new cases must be made public in the same manner; and the mayor must also see that a big placard is posted up outside every house where there is a case of infectious disease to announce the fact to the public. The children living in infected houses are strictly forbidden to go to school and no child that has not been vaccinated is allowed to enter a school. Vaccination is gratuitous and compulsory, and animal lymph is generally employed.

Finally, the law of March 28th, 1877, says that all ships coming from infected countries shall be inspected, the patients on board shall be conveyed to a special hospital and isolated, and the drinking-water and bilge-water shall be pumped out; but when the disinfection has been carried out the ship shall be given free pratique and the passengers

and crew allowed to go where they please, though they must be under surveillance for five days. If, however, there are no patients on board and there has been no sickness during the voyage, then the ship shall receive free pratique, even though it comes from an infected port. That is the principle; but the inspector may, at his own discretion, detain any ship that seems especially unclean and insist on its being properly cleaned before free pratique is given. Thus during the great epidemic all ships from Hamburg were made to pump out their bilge and change their drinking-water supply; but in all these matters a great deal is left to the discretion of the inspector. He examines emigrants and judges as to their condition, and, whilst giving great latitude to ships that are thoroughly clean and well managed, is somewhat severe in the case of dirty and badly kept ships. No attempt is made to disinfect merchandise unless it has actually been soiled by dejecta.

In the event of an epidemic the staff of inspectors may be considerably increased; thus there are now twelve extra medical men employed in the inspection of ships who are for the most part army medical officers. Laboratories for the bacteriological examination of dejecta taken from supposed cholera patients have also been organised. There are now five bacteriological laboratories scattered over different parts of Holland. The most important is at Utrecht, where Professor Spronch worked with great zeal during the cholera epidemic, sparing no pains and undertaking a great number of journeys in order to collect the dejecta he proposed to examine. It should also be mentioned that the Government has granted a special budget to establish a School of Disinfection. The Minister of the Interior has addressed a circular to the mayors throughout Holland inviting them to send to the Hague likely pupils so that they might be taught how to disinfect infected localities, clothes, furniture &c., in order to train for each commune of Holland a staff of competent disinfectors.

It will be seen from this brief summary of the Dutch laws that the Government has centralised the public health service in its own hands. There is much to be said in favour of such centralisation, though there are also potent arguments against it. But practice is more important than all theory, and in Holland there exists an illustration of the application of the theory of centralisation. Medical officers of health, factory, veterinary and asylum inspectors, and the mayors of communes are all absolutely independent of local influences and of the votes of local electors; they should therefore be able to act with great energy and uniformity. In one respect the system has worked well; there has been no attempt at secrecy. The real state of affairs has been known from the very first and no fear of damaging local interests has caused the truth to be held back. The system has also worked well in dealing with cases of cholera coming from abroad. The patients were successfully isolated and it does not seem as if the disease had spread in Holland through personal contact. As already stated, the Government medical authorities believe that dejecta from ships contaminated the watercourses, and it is not clear how this can be prevented where there are inland tidal ports.

SOCIETY FOR THE STUDY OF INEBRIETY.

AT a reception to Sir B. W. Richardson, held on July 4th, in the rooms of the Medical Society of London, a large and influential company assembled at the invitation of the President and Council of the Society for the Study of Inebriety. The President (Dr. Norman Kerr), after referring to the brilliant record of their distinguished guest in the domain of medicine, literature and science, as well as in his endeavours to aid in the moral advancement of the human race, proposed a resolution congratulating him on the honour conferred on him by Her Majesty.

The resolution was seconded by Dr. George Harley, supported by Brigade-Surgeon Pringle, Surgeon-Major Poole, Dr. Bridgewater, Dr. Danford Thomas and Dr. Parsons (Worthing). After the presentation of a basket of roses to Lady Richardson by Miss Norah Kerr,

Sir BENJAMIN W. RICHARDSON, in acknowledging the flattering terms in which his services had been spoken of and the gratification he had experienced by being surrounded by so many friends desirous of doing him honour, gave an epitome of the work in which he had for forty years been engaged. It was his mother's last wish, he said, expressed when he was but a child, that he should be engaged in the study and practice of medicine, and he had never regretted having entered that career. Soon he found himself encountered by foes—more formidable than those encompassed by steel—foes in the form of disease, pain and sorrow, quite as fatal, quite as cruel, though less visible and tangible He joined that corps of brave and earnest men whose whole energies were directed to the solution of the question, How shall pain, disease and even death, as an enemy, be averted or vanquished? He entered the contest with perfect freedom of thought and action. He was accused of being a visionary and of allowing imagination to stand for fact. He heeded not, but, concealing the labour by which he arrived at truth, was content to state what he knew admitted of proof. Imagination founded on observation he did not, however, despise, but regarded it as an auxiliary in the investigation of fact. He next spoke of the dangers incident to indulgence in intoxicants, and referred to the picture drawn by him of a city he named "Toxicopolis," the inhabitants of which were slaves to inebriety. His labours directed to the relief of pain and for removing the pangs of death were next referred to. Finally, he renewed his thanks for the kind expressions vouchsafed him on this occasion, and concluded with the following peroration: "I recall from my readings of the past how many men of richer qualities of industry and talent have preceded me on the same lines of research and paths of science, breathing the same aspirations, yet passing away unrewarded and practically unknown in their day and generation; whilst I, like a spoiled child of victory, enjoy the fate which had so much more worthily been theirs. The fact would oppress me were it not brightened by the hope that in the better future when labours like mine, recognised at last with so much honour, will be so sure of reward that every man and woman following in the same fields of new knightly service will feel certain of the same reception, until, under their continued triumphs, this living world shall all be transformed into an earthly haven and heaven of health, happiness and peace."

RETURN OF STILLBIRTHS IN ENGLAND AND OTHER COUNTRIES.

IT is seldom that a Parliamentary return is so replete with interest as that which relates to stillbirths in England and other countries which was asked for by Viscount Grimston, and ordered by the House of Commons to be printed on June 21st, 1893. For it deals not only with all that relates to stillbirths but with the important subjects of fœticide and its punishment, of the recognition and regulation of midwives, and of child-birth mortality. We propose now to deal only with the subject of stillbirths. The questions which were given for the purpose of this return were these: 1. Whether the registration of stillbirths is compulsory; and if so, what Act regulates this? 2. Is the registration carried out by the authorities who register ordinary births and deaths? 3. Are stillbirths registered as births or deaths, or both? 4. What is the legal definition of a stillborn child? 5. What are the penalties for neglecting to register a stillbirth? 6. Is the number of stillborn children interred and registered in the year 1890 known, and if so what was such number? 8. Copy of regulations and forms of certificates used in registering stillbirths. Questions 7 and from 9 to 12 relate to other matters. Now, with reference to the United Kingdom, the replies are almost all in the negative. In reply to question 4 there is a slight variation. In England a "stillborn child" is understood to mean "not born alive," in Scotland "a child who has never breathed after parturition," in Ireland "a child which has not lived by reason of breathing through its own lungs alone." In reply to question 6, the number of stillborn children interred in 1890 was 17,335 in the Burial Board cemeteries in England (only a proportion of the whole number); from Scotland and Ireland no figures are returned. All the other questions are answered in the negative. Passing on to France we see a very different state of things. There the decree of July 4th, 1806, renders the registration of stillborn children on the registers of the civil estate compulsory. The registrar of births and deaths is the official whose duty

it is to draw up the deed of registration of a stillborn child. In pursuance of the terms of Article 2 of the above decree the deed of registration is only entered in the registration of deaths, the object of this decree not being to ascertain whether the child was born dead or alive, the registrar is only bound to register the fact that the dead body of the child was produced before him and the entry is therefore made in the death register alone without any mention being made as to whether the child was born dead or whether it had died after its birth. Curiously enough, there is in France no real legal definition of a stillborn child, since by Article 55 of the Civil Code the birth of a child must be registered within three days after it has been brought into the world it follows that a large number of children that have breathed, or even lived, to the third day are registered as stillborn and are consequently included in the lists of stillborn children. The French system, therefore, requires that for correctness statistics of stillbirths should be divided into two classes—(1) stillborn children, (2) children who have died before their birth has been registered. It would appear, moreover, from a decision of the Court of Besançon of Oct. 31st, 1844, that the registration of a stillbirth is held by French jurisprudence to include not only children who have been the full term in the womb, but all such as are born sufficiently formed for it to be possible to declare the sex. The registration of stillbirths is practically compulsory in France, since the death of a child at the moment of its birth does not free those present from the obligation of declaring the birth under pain of fine and imprisonment. Again, anyone finding the dead body of a child and not causing it to be brought to the registrar of deaths is also liable to fine and imprisonment. The number of children born dead in France in 1890 numbered 40,535, a proportion of 4·6 per cent. (presumably upon the total number of births, though this is not stated); but it must be remembered that these figures include children who have died before the expiration of the legal three days' delay in which a birth must be registered. In Paris the total number of births in 1890 was 57,787, and that of children registered as born without life amounted to 4239 (2327 boys and 1912 girls), which gives a percentage of 7·33. A most elaborate form, giving full details, is used for the registration; no certificate is required from a midwife, but if any doubt arose as to the cause of death midwives possessing certificates might be called upon to give evidence. In Spain the registration of stillbirths is not compulsory, but for the purpose of burials a Royal order was issued on Jan. 30th, 1871, requiring that the proper medical certificate must be presented to the municipal court stating the hour at which the miscarriage took place; at what period it was, approximately; the sex if known; the name, surname and domicile of the woman and of the husband, if there be one; and that a special register for these cases must be kept at the municipal courts called the Register of Stillbirths (Regajo de Abortos). The registration is carried out by the authorities of the municipal court neither as births nor deaths, but only for the purpose of burial. A stillborn as opposed to a liveborn child is one born six months and one day from the presumable time of conception. From a medical point of view stillborn (feto) is the term used to designate in the human species the product of conception at a certain period of gestation. From a legal point of view stillborn is understood to specify any product of gestation which has lived less than twenty-four hours outside the womb. For the purposes of the penal code no products of gestation which have breathed are considered stillborn. There is a penalty of from twenty to 100 pesetas for burying a stillbirth contrary to these regulations. In 1890 the number of stillborn children interred and registered in Madrid was 1229, the total number in Spain being 7830. In the German Empire stillbirths are registered compulsorily as deaths, only this must be done at the latest on the day next following birth, with full details of place, day and hour of birth, sex of child, first and family names, religion, description, or trade and address of parents. The registration is carried on by the authorities charged with the recording of all Acts pertaining to marriages, births, deaths &c. There is no legal definition of a stillborn child, the German Legislature having expressly abstained from elucidating this point. In science only a viable fœtus is recognised as a "child," and in practice only a fœtus of seven months is considered to be capable of living; the authorities take no cognisance of any below this age, regarding them as immature. Neglecting to notify a stillbirth is punishable by a fine of 150 marks or with imprisonment, and for the neglect of registering a stillbirth a fine is imposed. There are no statistical returns at present available from which it would be possible to ascertain the number of stillborn children interred and registered in the year 1890. The entry in the register is very full and complete; neither certificates of death nor of stillbirth are requisite or admissible, as the Act provides that the announcement shall in each case be made personally by a witness. A midwife must personally appear before the registrar in order to effect a legal registration; a certificate does not suffice. These regulations also apply to Bavaria, Saxe-Coburg Gotha, Hesse, Baden and Saxony; the number of children buried as stillbirths being for each of these localities, 6436, 231, 1139, 1446 and 5147 respectively. In Austria, Hungary, Italy, Norway, Sweden and Denmark, stillbirths are registered, the numbers for 1890 being: in Austria, 26,315; Hungary, 13,193; Italy, 42,117; Norway, 1567; Sweden, 3557; Denmark, no return. Except in Sweden there are fines for non-registration, stillbirths being entered as births and deaths in Austria, as deaths in Hungary, as births in Italy and Sweden, separately from births and deaths in Norway and as stillbirths in the column of deaths in Denmark. In Russia there exists no legal registration of stillbirths, nor are there any statistics of burials. It will be seen, therefore, that, with the exception of Russia and the United Kingdom, the registration of stillbirths is universal all through Europe. Very elaborate returns are given from the colonies; these must, however, be left for future notice.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6533 births and 4496 deaths were registered during the week ending July 1st. The annual rate of mortality in these towns, which had increased in the preceding five weeks from 17·5 to 22·1 per 1000, further rose last week to 22·7. In London the rate was 22·2 per 1000, whilst it averaged 23·1 in the thirty-two provincial towns. The lowest rates in these towns were 12·6 in Oldham, 14·2 in Brighton, 14·6 in Bristol, 15·3 in Halifax and 15·5 in Hull; the highest rates were 28·8 in Plymouth, 29·5 in Manchester, 30·1 in Birkenhead, 37·0 in Liverpool and 41 6 in Preston. The 4496 deaths included 1108 which were referred to the principal zymotic diseases, against 675 and 924 in the preceding two weeks; of these, 713 resulted from diarrhœa, 96 from measles, 93 from whooping-cough, 88 from diphtheria, 63 from scarlet fever, 42 from "fever" (principally enteric) and 13 from small-pox. No fatal case of any of these diseases occurred last week in Huddersfield; in the other towns they caused the lowest death-rates in Oldham, Halifax and Bristol, and the highest rates in Bradford, Liverpool, Birkenhead, Leicester and Preston. The greatest mortality from measles occurred in Gateshead, Manchester, Preston and Blackburn; from scarlet fever in Norwich; from whooping-cough in Birkenhead, Brighton and Norwich; from "fever" in Burnley; and from diarrhœa in Manchester, Salford, Cardiff, Bradford, Liverpool, Birkenhead, Leicester and Preston. The 88 deaths from diphtheria included 64 in London, 4 in Manchester, 3 in West Ham, and 3 in Croydon. Three fatal cases of small-pox were registered in London, 3 in Bradford and 1 each in West Ham, Birmingham, Leicester, Manchester, Oldham, Halifax and Hull; 397 cases of this disease were under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last; 76 new cases were admitted during the week, against 80, 105 and 59 in the preceding three weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2775, against numbers increasing from 2024 to 2689 on the preceding eleven Saturdays; 346 new cases were admitted during the week, against 290, 264 and 309 in the preceding three weeks. The deaths referred to diseases of the respiratory organs in London, which had increased from 233 to 252 in the preceding three weeks, were 250 last week, and were 40 above the corrected average. The causes of 64, or 1·4 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Oldham, Bradford, Hull, Newcastle-upon-Tyne, and in eleven other smaller towns; the largest proportions

of uncertified deaths were registered in Bristol, Birmingham and Preston.

In thirty-three of the largest English town 5786 births and 4702 deaths were registered during the week ending Saturday, July 8th. The annual rate of mortality in these towns, which had risen from 17·5 to 22·7 per 1000 in the preceding six weeks, further increased last week to 23·8. In London the rate was 22·3 per 1000, whilst it averaged 24·8 in the thirty-two provincial towns. The lowest rates in these towns were 11·8 in Derby and in Oldham, 13·5 in Norwich, 15·0 in Plymouth and in Huddersfield and 16·5 in Nottingham; the highest rates were 32·0 in Bolton, 32·1 in Leicester, 32·2 in Manchester, 34·9 in Liverpool and 42·1 in Preston. The 4702 deaths included 1197, which were referred to the principal zymotic diseases, against numbers increasing from 415 to 1108 in the preceding five weeks; of these, 816 resulted from diarrhœa, 112 from measles, 85 from whooping-cough, 76 from diphtheria, 54 from scarlet fever, 41 from "fever" (principally enteric) and 13 from small-pox. The lowest death-rates from these diseases were recorded in Bristol, Plymouth, Huddersfield and Halifax, whilst they caused the highest rates in Birmingham, Liverpool, Blackburn, Bolton, Leicester and Preston. The greatest mortality from measles occurred in Liverpool, Burnley, Newcastle-upon-Tyne, Cardiff, Preston and Blackburn; from scarlet fever in Bolton; from whooping-cough in Birkenhead, Gateshead and Blackburn; from "fever" in Burnley, Huddersfield and Sunderland; and from diarrhœa in Sheffield, Wolverhampton, Manchester, Liverpool, Birmingham, Bolton, Leicester and Preston. The 76 deaths from diphtheria included 54 in London, 5 in Manchester and 4 in West Ham. Nine deaths from small-pox were registered in London, 2 in Birmingham, 1 in West Ham and 1 in Bradford, but not one in any other of the thirty-three large towns; 381 cases of this disease were under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, against 490, 410 and 397 at the end of the preceding three weeks; 68 cases were admitted during the week, against 59 and 76 in the preceding two weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2835, against numbers increasing from 2024 to 2775 on the preceding twelve Saturdays; 362 new cases were admitted during the week, against 309 and 346 in the preceding two weeks. The deaths referred to diseases of the respiratory organs in London, which had been 252 and 250 in the preceding two weeks, declined to 235 last week, but were 36 above the corrected average. The causes of 62, or 1·3 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Brighton, Bolton, Manchester, Oldham, Sunderland and in nine other smaller towns; the largest proportions of uncertified deaths were registered in Bristol, Birmingham, Leicester and Liverpool.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 20·2 and 22·0 per 1000 in the preceding two weeks, declined again to 21·5 during the week ending July 1st, and was 1·2 per 1000 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 14·7 in Leith and 16·6 in Paisley to 22·8 in Glasgow and 34·0 in Greenock. The 607 deaths in these towns included 56 which were referred to diarrhœa, 44 to measles, 17 to whooping-cough, 8 to diphtheria, 5 to scarlet fever, 5 to "fever" and not one to small-pox. In all, 135 deaths resulted from these principal zymotic diseases, against 98 and 127 in the preceding two weeks. These 135 deaths were equal to an annual rate of 4·8 per 1000, which was slightly below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of diarrhœa, which had been 12 and 43 in the preceding two weeks, further rose to 56 last week, of which 35 occurred in Glasgow and 6 in Edinburgh. The deaths referred to measles, which had been 46 and 50 in the preceding two weeks, declined again to 44 last week, and included 21 in Glasgow, 13 in Greenock and 7 in Edinburgh. The 17 fatal cases of whooping-cough showed a slight further decline from those recorded in recent weeks, and included 9 in Glasgow and 4 in Dundee. The deaths from diphtheria, which had been 6 in each of the preceding two weeks, rose to 8 last week, of which 4 occurred in Glasgow, where 4 of the 5 fatal cases of scarlet fever were also recorded. The deaths referred to diseases of the respiratory organs in these towns, which had been 98 and 99 in the preceding two weeks, declined to 89 last week, and were identical with the number in the corresponding week of last year. The causes of 53, or nearly 9 per cent., of the deaths in the eight towns were not certified.

The annual rate of mortality in the eight Scotch towns, which had been 22·0 and 21·5 per 1000 in the preceding two weeks, was again 21·5 during the week ending July 8th, and was 2·3 per 1000 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 16·1 in Aberdeen and in Leith and 17·3 in Edinburgh, to 25·2 in Glasgow and 25·7 in Greenock. The 607 deaths in these towns included 56 which were referred to diarrhœa, 32 to measles, 23 to whooping-cough, 9 to diphtheria, 5 to scarlet fever, 1 to small-pox and 1 to "fever." In all, 132 deaths resulted from these principal zymotic diseases, against 127 and 135 in the preceding two weeks. These 132 deaths were equal to an annual rate of 4·7 per 1000, which was 1·3 below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of diarrhœa, which had been 12, 43 and 56 in the preceding three weeks, was again 56 last week, of which 43 occurred in Glasgow and 5 in Edinburgh. The deaths referred to measles, which had been 50 and 44 in the preceding two weeks, further declined to 32 last week, and included 20 in Glasgow and 10 in Greenock. The 28 fatal cases of whooping-cough showed a marked increase upon those recorded in recent weeks; 15 occurred in Glasgow, 7 in Edinburgh and 4 in Dundee. The deaths from diphtheria, which had been 6 and 8 in the preceding two weeks, further rose to 9 last week, and included 6 in Glasgow. Of the 5 fatal cases of scarlet fever 3 occurred in Edinburgh and 2 in Glasgow. The death from small-pox was recorded in Edinburgh. The deaths referred to diseases of the respiratory organs in these towns, which had been 99 and 89 in the preceding two weeks, were 87 last week, and exceeded by 16 the number in the corresponding week of last year. The causes of 41, or nearly 7 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 28·2 and 25·4 per 1000 in the preceding two weeks, rose again to 30·7 during the week ending July 1st, a higher rate than in any week since January last. During the thirteen weeks of last quarter the death-rate in the city averaged 26·2 per 1000, against 19·5 in London and 18·0 in Edinburgh. The 206 deaths registered in Dublin during the week under notice showed an increase of 36 upon the number in the previous week and included 35 which were referred to the principal zymotic diseases, against 21 in each of the preceding two weeks. Of these, 22 resulted from diarrhœa, 7 from whooping-cough, 5 from "fever," 1 from diphtheria, and not one from small-pox, measles, or scarlet fever. These 35 deaths were equal to an annual rate of 5·2 per 1000, the zymotic death-rate during the same period being 5·3 in London and 3·5 in Edinburgh. The fatal cases of diarrhœa, which had been 3 and 9 in the preceding two weeks, further rose to 22 last week. The deaths from whooping-cough, which had been 9 and 1 in the preceding two weeks, rose again to 7 last week. The deaths referred to different forms of "fever," which had been 2, 3 and 4 in the preceding three weeks, further rose to 5 last week. The 206 deaths registered in Dublin last week included 42 of infants under one year of age and 45 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a further increase upon those recorded in recent weeks. Two inquest cases and 2 deaths from violence were registered; and 66, or nearly a third, of the deaths occurred in public institutions. The causes of 22, or nearly 11 per cent., of the deaths registered in the city last week were not certified.

The death-rate in Dublin, which had been 25·4 and 30·7 per 1000 in the preceding two weeks, declined again to 24·6 during the week ending July 8th. During the thirteen weeks of last quarter the death-rate in the city averaged 26·2 per 1000, against 19·5 in London and 18·0 in Edinburgh. The 165 deaths in Dublin during the week under notice showed a decline of 41 from the number in the preceding week, and included 34 which were referred to the principal zymotic diseases, against 21 and 35 in the preceding two weeks; of these, 22 resulted from diarrhœa, 6 from measles, 3

from "fever," 2 from whooping-cough, 1 from scarlet fever, and not one from small-pox or diphtheria. These 34 deaths were equal to an annual rate of 5·1 per 1000, the zymotic death-rate during the same period being 5·2 in London and 3 5 in Edinburgh. The fatal cases of diarrhœa, which had increased from 3 to 22 in the preceding three weeks, were again 22 last week. The deaths referred to different forms of "fever," which had been 3, 4 and 5 in the previous three weeks, declined again to 3 last week. The 2 fatal cases of whooping-cough showed a decline of 5 from the number in the preceding week. The 165 deaths registered in Dublin last week included 50 of infants under one year of age and 31 of persons aged upwards of sixty years; the deaths of infants showed a further increase upon recent weekly numbers, while those of elderly persons showed a marked decline. Three inquest cases and three deaths from violence were registered; and 35, or nearly a fourth, of the deaths occurred in public institutions. The causes of 7, or more than 4 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS OF LONDON DURING JUNE, 1893.

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality during June in each of the forty-one sanitary districts of London. With regard to the notified cases of infectious disease in the metropolis during last month, it appears that the number of persons reported to be suffering from one or other of the nine diseases in the accompanying table was equal to 18·1 per 1000 of the population, estimated at 4,305,551 persons in the middle of this year. In the preceding three months the rates were respectively 8·6, 10·5, and 13·5 per 1000. Amongst the various sanitary districts the rates last month were considerably below the average in Kensington, Fulham, Chelsea, Strand, Camberwell, Woolwich, and Plumstead; whilst they showed the largest excess in St. James Westminster, Clerkenwell, Bethnal Green, Mile End Old Town, Poplar, St. Saviour Southwark, St. George Southwark, and Newington. The prevalence of small-pox in London showed a marked decline during June, an average of 89 cases weekly being notified, against numbers increasing from 20 to 134 in the preceding five months; of the 357 cases notified during last month, 38 belonged to St. James Westminster, 27 to Lambeth, 26 to Newington, 23 to Battersea, 20 to St. Pancras, and 20 to Poplar sanitary districts. The Metropolitan Asylum Hospitals contained 371 small-pox patients at the end of June, against numbers increasing from 39 to 516 at the end of the preceding six months; the weekly admissions averaged 75, against 38, 55, 106, and 117 in the preceding four months. The prevalence of scarlet fever in London showed a marked further increase upon that recorded in recent months; this disease was proportionally most prevalent in St. Martin-in-the-Fields, Clerkenwell, City of London, Bethnal Green, Mile End Old Town, St. Saviour Southwark, St. George Southwark, and Wandsworth sanitary districts. The Metropolitan Asylum Hospitals contained 2654 scarlet fever patients at the end of June, against 1938, 2024, and 2511 at the end of the preceding three months; the weekly admissions averaged 282, against 196, 219, and 309 in the preceding three months. Diphtheria also showed increased prevalence during the month under notice; amongst the various sanitary districts this disease showed the highest proportional prevalence in Hammersmith, Strand, Holborn, Clerkenwell, Bethnal Green, St. George-in-the-East, Poplar, and Battersea. There were 293 cases of diphtheria under treatment in the Metropolitan Asylum Hospitals at the end of June, against 302 and 296 at the end of the preceding two months; the weekly admissions averaged 70, against 50, 61, and 64 in the preceding three months. Enteric fever was proportionally most prevalent during June in Holborn, Clerkenwell, Shoreditch, Limehouse, Mile End Old Town, Poplar, and Woolwich sanitary districts. The Metropolitan Asylum Hospitals contained 87 enteric fever patients at the end of June, against 37, 50, and 38 at the end of the preceding three months; the weekly admissions averaged 22, against numbers declining from 10 to 6 in the preceding four months. Erysipelas showed the highest proportional prevalence during the month under notice in Holborn, Clerkenwell, St. Luke, Bethnal Green, Limehouse, Mile End Old Town, Poplar, and Newington sanitary districts. Five cases of puerperal fever were notified during June in Islington, 5 in Hackney, and 5 in Bethnal Green sanitary districts.

The mortality statistics in the accompanying table relate to the deaths of persons actually belonging to the various metropolitan sanitary districts, the deaths occurring in the institutions of London having been distributed amongst the various sanitary districts in which the patients had previously resided. The distribution of these deaths, and especially of those resulting from zymotic diseases, affords the most trustworthy data that can be secured upon which to calculate reliable rates of mortality. During the four weeks ending Saturday, July 1st, the deaths of 6640 persons belonging to London were registered, equal to an annual rate of 20·1 per 1000, against 19·8 and 17·7 in the preceding two months. The lowest death-rates during June in the various sanitary districts were 11·5 in Hampstead, 13·6 in St. Saviour Southwark, 13·8 in Lewisham (excluding Penge), 14·0 in Paddington, 14·5 in Wandsworth, and 15·2 in St. Olave Southwark; in the other sanitary districts the rates ranged upwards to 28·3 in Shoreditch, 30·0 in Clerkenwell, 30·2 in St. George Southwark, 30·4 in Limehouse, 31·1 in Strand, 37·8 in St. George-in-the-East, and 39·0 in St. Luke. During the four weeks of June 1358 deaths were referred to the principal zymotic diseases in London; of these, 572 resulted from diarrhœa, 230 from diphtheria, 185 from whooping-cough, 172 from measles, 129 from scarlet fever, 47 from different forms of "fever" (including 45 from enteric fever and 2 from ill-defined forms of fever), and 23 from small-pox. These 1358 deaths were equal to an annual rate of 4·1 per 1000, against 2·0, 2·1, and 2·3 in the preceding three months. Amongst the various sanitary districts the lowest zymotic death-rates were recorded in Paddington, St. James Westminster, Hampstead, St. Martin-in-the-Fields, City of London, and Lewisham; and the highest rates in Clerkenwell, St. Luke, Shoreditch, St. George-in-the-East, Mile End Old Town, Poplar, and St. George Southwark. Twenty-three fatal cases of small-pox were registered in London during the month under notice, the corrected average number in the corresponding periods of the preceding ten years being 25; of these 23 deaths, 4 belonged to Greenwich, 3 to St. Pancras, 3 to Limehouse, and 3 to Rotherhithe sanitary districts. The 172 deaths referred to measles were 106 below the average; amongst the various sanitary districts this disease showed the highest proportional fatality in Clerkenwell, St. Luke, Whitechapel, Greenwich, and Woolwich. The 129 fatal cases of scarlet fever exceeded by 59 the corrected average number; this disease was proportionally most fatal in St. George Hanover-square, St. Giles, Strand, Clerkenwell, St. George Southwark, and Woolwich sanitary districts. The 230 deaths referred to diphtheria were as many as 146 above the corrected average number; amongst the various sanitary districts this disease showed the highest proportional fatality in St. George Hanover-square, Clerkenwell, Shoreditch, St. George-in-the-East, Mile End Old Town, Poplar, and Bermondsey. The 185 fatal cases of whooping-cough were slightly below the corrected average number; this disease was proportionally most fatal in Marylebone, St. Giles, St. Luke, Shoreditch, and Rotherhithe sanitary districts. The 47 deaths referred to different forms of "fever" were 5 above the corrected average number; amongst the various sanitary districts the highest "fever" death-rates were recorded in Limehouse and Poplar. The 572 fatal cases of diarrhœa were more than four times the corrected average; this disease showed the highest proportional fatality in Kensington, Fulham, Clerkenwell, St. Luke, Shoreditch, and St. George-in-the-East sanitary districts. In conclusion, it may be stated that the mortality in London during June from these principal zymotic diseases was as much as 65 per cent. above the average, owing principally to the excessive mortality of summer diarrhœa.

Infant mortality in London during the month under notice, measured by the proportion of deaths under one year of age to registered births, was equal to 202 per 1000 and considerably exceeded the average; the lowest rates of infant mortality were recorded in Marylebone, Hampstead, St. Giles, City of London, St. Saviour Southwark, and Lewisham; the highest rates in Fulham, Westminster, Clerkenwell, St. Luke, St. George-in-the-East, Limehouse, Poplar, and St. George Southwark sanitary districts.

PRESENTATION.—On Friday, June 30th, Mr. W. Odell, F.R.C.S. Eng., of Torquay, was presented with a handsomely bound set of Darwin's works in recognition of his services as a lecturer to the St. John Ambulance classes. An illuminated address was contained in the first volume as follows: "Presented to W. Odell, Esq., F.R.C.S.Eng., by the following members of the First Aid and Nursing Classes held at Upton, Torquay, during February, March, April and May, 1893, in token of their warm appreciation of his valuable and painstaking instruction."

MONTHLY ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON.—JUNE, 1893.

(Specially compiled for THE LANCET.)

Sanitary areas.	Estimated population in the middle of 1893.	Notified Cases of Infectious Disease.										Deaths from Principal Infectious Diseases.										Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.†	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.			
LONDON..	4,305,551	357	3293	1190	1	361	24	36	724	6	5992	18·1	23	172	129	230	125	—	45	2	572	1318	4·1	6640	20·1	202
West Districts.																										
Paddington	120,277	2	89	17	—	4	2	1	16	—	131	14·2	1	—	3	2	8	—	1	—	4	19	2·1	129	14·0	145
Kensington	167,038	2	88	27	—	4	—	—	21	—	142	11·1	—	1	5	8	8	—	—	—	13	35	2·7	207	16·2	225
Hammersmith	103,674	2	75	41	—	5	1	—	22	—	146	18·4	1	—	3	2	4	—	2	—	23	35	4·4	152	19·1	228
Fulham	103,075	1	65	15	—	6	—	3	12	—	102	12·9	—	1	1	7	6	—	1	—	30	46	5·8	161	20·4	274
Chelsea	98,114	2	49	14	—	3	—	—	14	—	82	10·9	—	—	3	5	3	—	1	—	12	30	4·0	145	19·3	208
St. George Hanover-square	75,825	4	50	16	—	8	—	—	7	—	86	14·8	—	—	—	6	6	—	2	—	3	17	2·9	94	16·2	141
Westminster	54,761	4	37	3	—	8	—	—	4	—	56	13·3	—	—	—	1	—	—	1	1	12	15	3·6	99	23·6	352
Lt. James Westminster	23,873	38	14	6	—	1	—	1	2	—	62	33·9	—	—	—	—	—	—	—	—	2	2	1·1	44	24·0	159
North Districts.																										
Marylebone	139,546	19	100	39	—	8	—	—	26	—	192	17·9	—	2	5	5	12	—	1	—	9	34	3·2	220	20·6	142
Hampstead	73,949	—	58	9	—	1	—	—	10	—	78	13·8	—	—	—	3	—	—	—	—	2	5	0·9	65	11·5	90
St. Pancras	234,025	20	224	66	—	23	1	1	40	—	376	20·9	3	12	6	15	11	—	3	—	34	84	4·7	370	20·6	242
Islington	328,608	9	283	73	—	24	1	5	58	—	453	18·0	—	11	9	12	16	—	2	—	47	97	3·8	486	19·3	209
Hackney	240,177	6	168	57	—	19	2	5	37	—	296	16·1	—	3	6	9	16	—	1	1	24	60	3·3	299	16·2	161
Central Districts.																										
St. Giles	38,511	14	19	7	—	1	—	—	8	—	49	16·6	—	1	3	1	3	—	1	—	2	11	3·7	70	23·7	58
St. Martin-in-the-Fields	13,911	3	15	2	—	1	—	—	—	—	21	19·7	—	—	—	—	—	—	—	—	2	2	1·9	18	16·9	182
Strand	23,508	4	6	10	—	—	—	—	1	—	21	11·6	—	—	2	2	1	—	—	—	1	6	3·3	56	31·1	179
Holborn	32,646	3	20	12	—	6	—	—	11	—	52	20·8	—	1	1	2	1	—	—	—	3	8	3·2	60	24·0	232
Clerkenwell	65,163	1	94	26	—	9	2	—	16	—	149	30·0	—	15	5	5	3	—	—	—	18	46	9·2	150	30·0	312
St. Luke	41,406	3	40	10	—	3	—	—	13	—	70	22·0	—	15	1	3	5	—	—	—	10	34	10·7	124	39·0	390
City of London	35,383	3	36	10	—	3	—	—	4	—	56	20·6	—	—	1	1	—	—	—	—	2	4	1·5	43	15·8	114
East Districts.																										
Shoreditch	123,425	2	68	40	—	20	2	1	18	—	157	16·6	—	9	1	12	8	—	2	—	34	66	7·0	208	28·3	225
Bethnal Green	129,625	5	142	71	—	18	—	5	36	—	278	28·0	1	9	7	9	1	—	2	—	19	48	4·8	232	23·3	224
Whitechapel	75,163	7	59	18	1	2	—	—	10	—	97	16·8	—	6	3	4	2	—	—	—	7	22	3·8	130	22·5	182
St. George-in-the-East	45,182	5	31	26	—	2	—	1	8	—	76	21·9	—	3	—	6	1	—	—	—	19	29	8·4	131	37·8	407
Limehouse	57,386	11	33	15	—	16	—	—	13	—	94	21·4	3	2	1	4	1	—	3	—	10	24	5·5	134	30·4	324
Mile End Old Town	108,006	11	106	36	—	21	—	—	25	—	199	24·0	—	5	5	14	4	—	2	—	23	54	6·4	214	25·8	216
Poplar	168,876	20	128	143	—	53	1	1	44	—	392	30·3	1	1	8	22	8	—	9	—	27	76	5·9	330	24·7	265
South Districts.																										
St. Saviour Southwark	26,823	6	42	9	—	—	—	—	4	—	61	29·6	—	2	3	—	1	—	—	—	2	8	3·9	28	13·6	118
St. George Southwark	59,952	14	80	15	—	5	—	—	12	—	126	27·4	—	4	7	—	3	—	2	—	11	27	5·9	139	30·2	267
Newington	117,430	26	102	40	—	7	1	—	28	—	205	22·8	1	3	1	6	6	—	1	—	23	41	4·6	208	23·1	219
St. Olave Southwark	12,861	2	8	2	—	—	—	—	2	—	14	14·2	—	—	1	—	1	—	—	—	1	3	3·0	15	15·2	179
Bermondsey	84,244	10	61	27	—	7	—	—	16	—	123	19·0	—	6	4	10	2	—	1	—	12	35	5·4	138	21·4	167
Rotherhithe	39,764	6	28	10	—	3	—	—	8	—	56	18·4	3	—	—	1	7	—	2	—	2	15	4·9	56	18·4	247
Lambeth	280,567	27	199	60	—	19	9	3	48	5	374	17·4	—	13	4	7	14	—	3	—	20	61	2·8	368	17·1	175
Battersea	160,633	23	118	58	—	4	—	1	25	—	235	19·1	2	4	3	12	5	—	1	—	18	45	3·7	193	15·7	169
Wandsworth	169,379	3	100	27	—	6	—	2	31	—	232	17·8	—	5	1	10	7	—	—	—	22	45	3·5	188	14·5	184
Camberwell	246,837	11	141	38	—	14	2	2	26	1	238	12·6	2	8	4	10	7	—	2	—	32	65	3·4	346	18·3	189
Greenwich	173,349	15	121	30	—	5	—	2	26	—	199	15·0	4	14	6	7	2	—	—	—	19	52	3·9	269	20·2	208
Lewisham (excluding Penge)	76,593	1	55	10	—	8	—	2	10	—	88	15·0	—	2	1	4	—	—	1	—	2	10	1·7	81	13·8	125
Woolwich	41,794	7	19	1	—	8	—	—	2	—	38	11·9	1	6	3	1	1	—	—	—	3	15	4·7	75	23·4	157
Plumstead	94,192	4	55	10	—	—	—	—	10	—	83	11·5	—	5	3	5	1	—	1	—	13	28	3·9	115	15·9	153
Port of London	—	1	—	—	—	6	—	—	—	—	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Including 47 cases of membranous croup

† Including deaths from membranous croup.

THE SERVICES.

MOVEMENTS IN THE MEDICAL STAFF.

PROFESSOR J. LANE NOTTER, M.D., has returned to Netley from attending the Sanitary Congress at Chicago under the auspices of the World's Congress Auxiliary. Surgeon-Captain M. O'D. Braddell assumed Medical Charge of the Troops in Camp at Sheffield on the 5th inst., vice Surgeon-Lieutenant G. J. Buchanan, who has assumed Charge of the Station Hospital at Pontefract as a temporary measure. Surgeon-Major J. P. Hunt, M.D., will perform the duties of Surgeon-Major W. C. Gasteen, M.B., at the R. M. Academy from Aug. 1st to Sept. 30th. Surgeon-Major Donaldson has embarked for Bermuda on return from leave and Surgeon-Captain Maturin for Gibraltar. Surgeon-Major Tuthill has arrived from Gibraltar on leave. Surgeon-Captain Dillon has reported his arrival at Bristol for duty on completion of a tour of service in Malta. Surgeon-Lieutenant Longhurst has left Portsmouth for Ireland in Medical Charge of Troops on board the *Assistance*.

ARMY MEDICAL STAFF.

Surgeon-Captain Richard E. R. Morse to be Surgeon-Major.

INDIA AND THE INDIAN MEDICAL SERVICES.

The following appointments are announced:—Surgeon-Captain H. J. Younger, to the Medical Charge of the Baroda Residency, in addition to his duties as Acting Medical Officer, 1st Regiment Bombay Infantry. The appointment of Surgeon-Captain C. C. Cassidy to the Officiating Medical Charge of the 5th Punjab Cavalry is cancelled. Surgeon-Captain J. M. Crawford, M.B., C.M., I.M.S. (Bengal), whose services have been placed at the disposal of this Government, is appointed to be a Supernumerary Civil Surgeon, 2nd class, and to be posted to the Medical Charge of the Azamgarh District. The following transfers are ordered:—Surgeon-Major C. C. Vaid, Civil Surgeon, from Azamgarh to Bara Banki. Surgeon-Colonel C. Sibthorpe, I.M.S., Principal Medical Officer, from the Rangoon to the Secunderabad District and Surgeon-Colonel S. B. Hunt, Principal Medical Officer, from the latter to the former district. The services of Brigade-Surgeon-Lieutenant-Colonel G. C. Ross, Civil Surgeon of Rawal Pindi, are placed at the disposal of the Government of India in the Home Department for employment as Officiating Administrative Medical Officer and Sanitary Commissioner, Central Provinces. Surgeon-Major A. F. Ferguson has delivered over the Charge of the Shikarpur Gaol. Surgeon-Major Ranking, Calcutta, has joined the Pasteur Institute Committee. Brigade-Surgeon-Lieutenant-Colonel G. G. MacLaren, M.D., Civil Surgeon, Dehra Dun, retires from the service.

NAVAL MEDICAL SERVICE.

The following appointments have been announced: Staff-Surgeon Michael J. M'Carthy, M.D., to Esquimalt Hospital. Surgeons: Hubert Holyoake to the *Pembroke;* John W. Slaughter, B.A., M.B., to the *Magnet*, lent, and Hugh S. D. Griffiths to the *Traveller*, lent.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain Walter Hallam, having resigned his Volunteer appointment, ceases to be an Officer of the Army Medical Reserve of Officers.

MILITIA MEDICAL STAFF.

Surgeon-Major Thomas Carter, 4th Battalion, the Princess of Wales's Own (Yorkshire Regiment), to be Surgeon-Lieutenant-Colonel.

VOLUNTEER CORPS.

Rifle: 1st Volunteer Battalion, the Dorsetshire Regiment: Surgeon-Captain W. A. E. Hay to be Surgeon-Major.

WATER-SUPPLY SCHEMES IN MILITARY CANTONMENTS.

All sanitarians are agreed that a good water-supply is the most important requirement for India. Rivers, tanks and wells supplying drinking water are used by the natives for bathing and for washing foul linen, not to mention other objectionable sources of direct defilement, and the wells are not protected against the leakage of surface water and sewage, or against the use of foul vessels for drawing &c. water. What is wanted, as far as the towns and cantonments of India are concerned, is a good source of supply and the protection of the water against all contamination until it reaches the people who drink it. We are glad to learn, therefore, from the Indian papers, that efforts have been and are still being made in this direction in that country. Schemes for the supply of water to the cantonments of Rawal Pindi and Murree will be completed within the year. Over three lakhs of rupees will be expended at each station for this purpose. Work will also be commenced on the water-supply schemes for the Delhi, Dum-Dum, Solon, Agra and Bangalore cantonments.

DAHOMEY.

General Dodd's official report of the recent campaign in Dahomey has just been published in France. He gives a detailed history of the march of the troops and of the capture of Cana and Abomey. He is of opinion that the war may be regarded as at an end and that it remains for the French Government to fix the terms of surrender "in such a way as may be acceptable to an adversary whose courage and energy we must acknowledge." The report has not yet reached this country, but it will be very interesting to ascertain what was the health and sanitary condition of General Dodd's force during the campaign and what was the extent of the sickness from climatic causes which prevailed and the amount of invaliding and loss of life that took place in the expeditionary force during and subsequently to its military operations in that country.

SCARLET FEVER AND THE ALDERSHOT MANŒUVRES.

Sir Evelyn Wood has addressed a circular memorandum to the officers commanding Volunteer corps (numbering over 20,000 men) who have received permission to take part in the manœuvres next month, denying the existence of any epidemic of scarlet fever amongst the troops at Aldershot Camp. He says that there were only nine mild cases admitted in a week out of a total average strength of 19,284 men and adds that, as advised by the principal medical officer of the division, he had no hesitation in saying that Volunteer corps could attend the camp with safety, as proposed.

ANTI-CHOLERAIC INOCULATIONS.

The *Pioneer Mail* states that M. Haffkine has begun his inoculations amongst the residents of Simla, the seat of the Indian Government, and that Dr. Cunningham Joint Civil Surgeon, was amongst the first to be inoculated.

THE RECRUITMENT OF THE FRENCH ARMY.

From the report upon the recruitment of the French army for 1892, which has just been presented to the legislative Chambers, we gather that the average height of the men was 64·72 in. and that the proportion of those who could neither read nor write was 7 per cent. The effect of the diminution of the population in France is traceable in recent recruitment returns.

Correspondence.

"Audi alteram partem."

"TREATMENT OF HÆMOPTYSIS."

To the Editors of THE LANCET.

SIRS,—The letter of Mr. John Cochrane on the treatment of hæmoptysis, which appears in THE LANCET of the 8th inst., reminds me of a case I recorded in St Bartholomew's Hospital Reports, 1875, vol. xi., p. 240. The patient was a marine aged twenty-one who had been discharged from the navy with a pension under the impression that he was suffering from phthisis. When admitted into St. Bartholomew's Hospital there were physical signs of a large cavity in the left interscapular region. From the history and symptoms Dr. Gee came to the conclusion that the cavity was due to bronchiectasis and not to phthisis. The course of the case proved that this view was correct and I may mention that three years ago—i.e., eighteen years after his discharge from St. Bartholomew's Hospital—I saw the patient and I then found him in robust health, with no evidence of pulmonary mischief on physical examination. The point in the case to which I desire to direct attention at the present time is not, however, one of diagnosis but of treatment. The patient in question coughed up in the course of nine days upwards of four pints of bright blood—viz., on Sept. 4th three-quarters of a pint, on the 8th a pint, on the 9th upwards of a pint, on the 10th a pint, and on the 12th about half a pint. I have

never before or since seen so much blood coughed up in so short a space of time and the patient recover. The favourable result in this case I attribute to the use of ipecacuanha powder, which was ordered by Dr. Gee in ten-grain doses at intervals of ten minutes for three doses. In every attack the hæmorrhage was arrested as soon as vomiting occurred. It is only fair, however, to add that other astringents, such as turpentine and acetate of lead, were given at various times. In vol. vii. of St. Bartholomew's Hospital Reports Sir Dyce Duckworth has given a good account of the "Hæmostatic Action of Ipecacuanha" and its use in the treatment of hæmoptysis.

I am, Sirs, yours faithfully,

Wimpole-street, July 8th, 1893. F. DE HAVILLAND HALL.

"THE TREATMENT OF STRICTURE OF THE URETHRA BY ELECTRICITY."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of July 8th my friend Mr. Mansell Moullin has made some remarks on his experience of electrolysis in urethral stricture, and they are summed up in his last paragraph: "So far, then, as one is justified in drawing conclusions from such a limited number of cases my experience is in thorough agreement with the general impression as to the value of the constant current in the treatment of stricture. In certain instances—those, for example, in which there is an indurated mass involving the urethra, with a very narrow and perhaps tortuous channel through it—electricity may be of some use; it assists in softening the dense tissue and so renders more easy the application of more effective methods, and it may perhaps relieve muscular spasm to some extent. I have not been able to find any proof that it is capable of doing more than this."

As I was one of the first to try this method of treatment in England and have employed it, more or less, up to the present time, I should like to take exception to his remarks in certain particulars. If complete absorption is to be produced by the electric current the applications must be prolonged and often repeated. At the present time I still have under observation some of the patients on whom I first operated in 1886, and I have had but few recurrences in those who have submitted themselves unreservedly to a prolonged course of treatment. One patient, who had had extravasation of urine and whose stricture had been divided by external urethrotomy in 1885, was submitted to electrolysis in 1886 and is still well, his stricture showing no tendency to recontract. The reasons that have led to the partial abandonment of electrolysis for stricture are not so much its failure as its tedious character. Surgeons are beginning to appreciate that a stricture, if well divided and subsequently submitted to full dilatation, is capable of being cured quite as effectually and with much greater rapidity than if electrolysis be made use of. This is, I believe, the sole reason for the diminished preference for electrolysis that now obtains.

I am, Sirs, yours truly,

Harley-street, W., July 10th, 1893. W. BRUCE CLARKE.

THE INDIAN LEPER CENSUS.

To the Editors of THE LANCET.

SIRS,—The results of the Leper Census in India in 1881 and 1891 are given by Mr. J. A. Baines, the Census Commissioner, as 131,660 and 127,056 respectively, showing an absolute decrease of 4604. To these figures Mr. Tebb takes exception, endeavouring to explain them away by certain arguments set forth by him in THE LANCET of May 20th, 1893. Without entering into a discussion of the various points raised by Mr. Tebb and already dealt with in the Leprosy Commission Report, I should like to call attention to a very obvious fallacy which that gentleman's zeal seems to have overlooked. In 1881 no returns of lepers in Upper Burmah, Rajputana, Travancore and the Central Province States were made. In 1891 the numbers of lepers given for these districts were 3504, 1708, 968 and 1259 respectively, making a total of 7439. It is, to say the least, extremely unlikely that in 1881 there were no lepers in these four large tracts of country; indeed, judging from the rest of the twenty-nine districts mentioned by Mr. Baines in the Leper Census Return, it is probable that the number of lepers in 1881 was very nearly the same, if not greater, in these parts of India. The census of 1891, then, labours at this serious disadvantage that for these immense districts an apparent increase of 7439 lepers is shown where probably not half or a quarter or an eighth of that increase existed. In spite of this, however, the total shows an absolute decrease of 4604. It has often been said, and with considerable truth, that figures if sufficiently manipulated can be made to prove anything, but considerable ingenuity will be necessary to get over this enormous discrepancy, which, favouring as it does Mr. Tebb's side of the argument, only tends to make the decrease of leprosy shown by the last census the more convincing.

I am, Sirs, yours truly,

Trinidad, June 29th, 1893. BEAVEN RAKE.

"REPORT OF 'THE LANCET' COMMISSION APPOINTED TO INVESTIGATE THE SUBJECT OF THE ADMINISTRATION OF CHLOROFORM AND OTHER ANÆSTHETICS FROM A CLINICAL STANDPOINT."

To the Editors of THE LANCET.

SIRS,—The pronouncement in the leading article on the above subject published in THE LANCET of the 1st inst. that "the teaching of our medical schools has been deficient as regards anæsthetics. Our Commissioner believes—and a perusal of the cases appears to justify his statement—that many of the fatalities which occur under anæsthetics are preventable and arise through the want of experience of those who undertake what, after all, is a very serious responsibility—the administration of an anæsthetic," will, I trust, do good. Coming from a journal of unequalled influence and prestige, such as the THE LANCET, it cannot be ignored. Both in your columns and in my book "Anæsthetics, Ancient and Modern," I have drawn attention to this question. On page 42 of the work mentioned I wrote: "Until this [education in anæsthetics] is done the true value of the drugs will neither be known nor appreciated and we shall go on ascribing deaths to other than their true cause. The neglect of our licensing bodies to enforce thorough training is an essential of the science of medicine."—I am, Sirs, yours truly,

GEORGE FOY, F.R.C.S. Irel.

Cavendish-row, Rutland-square East, Dublin, July 3rd, 1893.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

The Great Vinegar Question.

AT the Quarter Sessions on the 4th inst. the appeal was heard in this case, and the Recorder decided that it should be dismissed. The real issue was whether dilute acetic acid could be sold as vinegar. The plea of usage was set forth, that vinegar was a generic term, that acetic acid was not injurious to health and that it fulfilled all the purposes of vinegar. These arguments, specious in themselves, did not cover the commercial aspect of the case where dilute acid is sold at a much cheaper price, nor did it detract from the legal appearance of fraud in selling such acid as vinegar. The appellants, who had been convicted under the Food and Drugs Act, were therefore rightly refused their application. The reversal of the previous sentence would have left the matter in a very unsatisfactory condition, but this judgment will, it is hoped, settle the dispute.

British Medical Association.

The annual meeting of the Birmingham branch was held on the 22nd ult. at the Medical Institute, the local President, Dr. Rickards, in the chair. There was a long and heated discussion on certain recommendations and amendments relating (1) to the payment of the railway fares of the members of the Parliamentary Bills Committee; and (2) a wage limit for hospital patients of this district. The debate was carried on with vigour, at times certain differences of opinion appearing irreconcilable.

New Small-pox Hospital.

This building has been commenced under the auspices of the Health Committee of the City Council. The land upon which it is to be erected is twenty-five acres in extent, distant about three and a half miles from the centre of the city and half a mile from any continuous line of buildings. The buildings will be in the form of two pavilions each to accommodate twenty-six patients; they will be replete with every

convenience for the purpose intended. The usual opposition has been raised to the locality, but it is recognised that the hospital must be built and that this site is as suitable as any which can be obtained.

The Domestic Cat.

A gentleman was lately summoned for poisoning a neighbour's cat with cyanide of potassium. The cat had ventured on to his premises, and it was shown that these were sufficiently protected to make the cat an intruder in the sight of the law. The case was therefore dismissed. Of course, apologists were not wanting for the misdeeds of the cat and the delinquencies of such animals were ascribed to their natural propensities. One correspondent writes that he is indebted to a cat for the introduction of scarlet fever into his house. He states also that a case of diphtheria was traced by the medical officer to a similar source, and to his knowledge small-pox was conveyed in a like manner. These are grave indictments, and if the cat can thus convey infection it is clear that some sanitary regulations will have to be put into force.

July 10th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Liverpool Police Athletics.

THE advantages of athletics for all are generally admitted, combining as they do recreation for the mind with wholesome exercise of the body. For police constables they are even more valuable and will in process of time be considered as a necessary adjunct of every well-organised police force. That policemen should be good walkers and even runners, capable of enduring much fatigue, must be obvious; still more necessary is it that those of their number who may be called on to extinguish fires should be nimble and agile, able to run smartly up the tallest ladder and to jump a considerable distance; for on their abilities in these respects their own lives and the lives of others may depend. The Liverpool Police Athletic Society has been established for eight years and is most popular both with the men and with their officers. The 1st inst. was the annual field day and was in all respects a success, the mayor and mayoress attending and the latter presenting the prizes. Such a society is certainly calculated to enhance the health of the men and it is well worthy of imitation by other police forces.

Small-pox and Vaccination.

The experience of the medical officers of the Parkhill Small-pox Hospital for infectious diseases during 1892 confirms that so often repeated as to the protective influence of vaccination against small-pox. Of a total of 170 patients who had been vaccinated only 6 died, whilst of 24 unvaccinated patients 9 died. In other words and figures, the mortality of the vaccinated was at the ratio of 3·52 per cent., whilst that of the unvaccinated was 37·5 per cent. Of the 24 unvaccinated patients 11 were under ten years of age and 5 of these died. These returns are taken from a most elaborate table prepared by Dr. Walker, the resident physician of the Small-pox Hospital, and are embodied in the report of the medical officer of health for 1892.

The Weather.

During the last few days there have been heavy thunder showers, accompanied on several occasions by thunder and lightning. The change after an unusually long period of drought has been very welcome and will probably show its effects upon the health of the city. For the last twenty-five years there has not been such a long unbroken spell of dry weather in this city.

The Welsh and Manx Visitors' Seasons.

The charming trips to the Welsh sea-side resorts Llandudno and Beaumaris and to the Isle of Man are in full swing, the season being but a comparatively short one as a rule, though it may be prolonged this year. These trips afford excellent opportunities for those many invalids whom the sea suits, but who prefer to sleep at home; whilst to those gifted with health but wearied with the week's toil they afford a delightful means of spending a quiet Sunday amidst beautiful scenery. The steam service to Belfast has been greatly improved in recent years and is much appreciated.

July 11th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Proposed Convalescent Home for Teeside.

A MOVEMENT is on foot, and has made considerable progress, for the establishment of a convalescent home for workmen and the poor to meet the wants of the larger Teeside towns.

Ambulance Work in the North.

The forthcoming ambulance review in Gosforth-park is looked forward to with interest, and should the weather prove favourable on the day appointed (Aug. 5th) no doubt there will be a very large attendance, as the railway and other facilities for reaching the park are numerous and very convenient. A military tournament, musical ride and other attractions are promised. A properly equipped hospital tent will be provided, and the nurses of the St. John Ambulance Association will attend. The members of the Hartlepool centres gave an interesting and successful demonstration last week. At the conclusion a presentation was made to the instructor, Dr. A. E. Morison, by the men's class, and also by the ladies of the ambulance and nursing class.

Penrith.

The proposed new hospital for the Penrith district has, after some delay, advanced another stage. The plans include a hospital mortuary and an ambulance, consequently the cost will exceed the original estimate. General Crozier has been sent down by the Local Government Board, and it is said that he is pleased with the plans and site for the buildings and will report favourably to the Board.

Small-pox at Seaham Harbour.

At the last meeting of the Seaham Harbour local board a resolution was passed expressive of their best thanks to their medical officer, Mr. Gibbon, for his unremitting attention to two small-pox patients whom he recently attended at the hospital and docks and for the care he took in their isolation, to which the board attribute the gratifying fact that the disease has not spread in the town.

The "Resolution."

This first-class battleship, built on the Tyne by Messrs. Palmer & Co., will leave for the Government dockyard to-morrow. She is, I believe, larger than the ill-fated *Victoria*. Good use was made of the *Resolution* last Saturday on the Tyne, when she was thrown open to visitors, and although the weather was unfavourable about 5000 persons went on board. The proceeds, about £100, will be divided between the survivors of the *Victoria* disaster and the Tyneside medical charities. The workmen employed by Sir W. G. Armstrong, Mitchell & Co. at Elswick have contributed over £300 for the last quarter to Tyneside medical charities.

Death of Mr. J. Paxton of Norham-on-Tweed.

The death was announced a few days ago of Mr. John Paxton at an advanced age. He was a well-known surgeon who practised on the Border for fifty-six years. He was also known as a naturalist and was, I believe, President of the Berwickshire Naturalists' Club.

Newcastle-on-Tyne, July 12th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

The Edinburgh Medico-Chirurgical Society.

THE last meeting of this Society for the session was held last week, Mr. Joseph Bell, F.R.C.S.Edin., President, in the chair. Mr. Alexis Thomson submitted notes of an interesting case of recovery following extra-peritoneal rupture of the bladder. Dr. Smart showed a girl of thirteen years of age suffering from hysterical paraplegia, and two interesting cases of spastic disease. The first paper was by Dr. Smart on the Treatment of Anæmia and Chlorosis by the Chief Iron Preparations commonly in Use. The communication was illustrated by a number of charts showing graphically the rise in the number of corpuscles and in the hæmoglobin richness produced by the various iron preparations. As all former experience has demonstrated, the sulphate as ordinarily given easily took the first place. Various other preparations were shown to be useful, but their place was far

behind the sulphate. Dr. Smart also laid stress upon the great importance of correcting gastric disorders in cases of anæmia, this being necessary for successful results from the use of iron. Mr. A. G. Miller read notes of a new Urethral Instrument, which he claimed to be better than those in common use. Dr. W. A. Finlay read notes of a case of Ruptured Kidney, with recovery after lumbar incision and drainage. He had shown the patient at the previous meeting of the Society.

Edinburgh University Examinations.

The Final Examinations are now finished and of about 300 candidates two-thirds have passed. The First Professional Examination will begin next week; for the first time it will be held under the new regulations. It is natural that some hitches should have occurred in the arrangements, but these will doubtless be satisfactorily surmounted.

Public Health Matters in Edinburgh.

During the month of June there were 332 cases of infectious disease reported. Of these, 25 cases were typhoid fever, 20 diphtheria, 4 small-pox, 83 scarlet fever and 200 measles. During the month 112 cases of infectious disease were admitted to the City Hospital, 118 were discharged and 6 died. Of the fatal cases, 3 were typhoid fever and 3 diphtheria. At the end of the month 142 remained in hospital. During June there were 377 deaths, making a death-rate of 16·90 per 1000. The average death-rate for June during the preceding five years was 15·57 per 1000. As regards age, 37·40 per cent. of the deaths were under five years of age, 15·11 per cent. between five and thirty years, 24·40 per cent. between thirty and sixty, and 23·07 per cent. above sixty. Of the total mortality 10·87 per cent. were due to zymotic diseases. The Public Health Committee have practically agreed about the plans for the extension of the City Hospital and they have now to submit their proposals to the town council. The estimated cost is £50,000.

July 11th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Need of Trained Nurses.

THE Local Government Board have issued a circular to boards of guardians stating that if any dangerous infectious disease should visit Ireland and become epidemic, the number of trained nurses would be found to be inadequate to meet the demand for their services. Under these circumstances the Local Government Board suggests that boards of guardians should make use of the workhouse hospitals for the purpose of training nurses, whose services would be available in the event of cholera or other formidable infectious disease appearing within the unions. The guardians of each union might select a limited number of suitable persons willing to enter their service for training, and the Local Government Board feel assured that if boards of guardians appointed a few young women as probationary assistant nurses in the hospital and fever wards of each workhouse the medical officers in charge and the regularly appointed nurses would be willing to afford them such practical instruction in the nursing and care of the sick as would qualify them to attend the sick poor in any epidemic which might arise. Under article 24 of the general regulations guardians are empowered to appoint temporary assistants, and the Local Government Board are prepared to sanction any reasonable expenditure undertaken in order to carry into effect the suggestion contained in their circular.

The Ulster Medical Society.

The annual meeting of this society was held on July 5th, when the following office-bearers were elected for next year: President, Dr. John W. Byers; vice-presidents, Dr. McCaw and Professor Sinclair; council, Drs. Ferguson, J. A. Lindsay, Bigger, McKenzie, Leslie and D. McDonnell; honorary treasurer, Dr. Charles Kevin; pathological secretaries, Drs. John Campbell and W. B. McQuitty; honorary librarian, Dr. Cecil Shaw; honorary secretary, Dr. McKisack.

The Belfast Water Bill.

This Bill, which passed through the House of Lords unopposed, was brought before a select committee of the House of Commons on July 4th and, after certain alterations, was passed and ordered to be reported to the House. By this scheme the new supply of water is to be brought from the Mourne Mountains in the county of Down, about forty-two miles from Belfast. There is to be a large storage reservoir on the Kilkeel River and an intersecting weir on Annalong River, a gravitation conduit thence to the service reservoir, which it is proposed to construct at Carryduff, about three miles from Belfast. From this it will be carried to the city of Belfast in cast-iron pipes under pressure. The total catchment area that can be ultimately made available amounts to some 17,000 acres of wild moorland, having a large amount of granite rock surface. By the present plan a supply of only some ten million gallons per day are proposed to be taken, but the district will afford an ultimate supply of twenty-eight million gallons a day, and even this can be increased. The total outlay for the first ten million gallons per day will be £750,000. The quality of the water has been pronounced to be very good.

Belfast District Lunatic Asylum.

At the monthly meeting of the board of governors, held on July 10th, a committee was appointed to consider the requirements for the accommodation of the lunatics of Belfast city, and to report on the best means of providing such accommodation.

July 11th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Treatment of Cholera.

THE result of the experience gained in Hamburg and elsewhere last year seems to be that in severe cases of cholera not much benefit is to be expected from the administration of drugs, but that the chief thing is to attempt the restoration of the body heat by means of hot blankets &c., or, best of all, by the subcutaneous injection of sterilised water containing common salt and carbonate of soda in solution at a temperature a little over that of the blood in health. For milder cases calomel has been found useful, possibly because it reaches the intestine partly as corrosive sublimate and acts by arresting the development of the comma bacillus. The use of opium, except so much as may be necessary to secure the retention of the calomel, is to be avoided.

Compulsory Notification.

In Berlin the notification of the convalescence, or death, or removal of cases of cholera, small-pox, typhus fever, intermittent fever and diphtheria has been made compulsory upon the proprietors of hotels, lodging-houses &c. in order that the infected rooms and effects may be at once thoroughly disinfected by the public officials. The notification has to be made within twenty-four hours.

Asepsis in Military Surgery.

Prof. Wagner publishes in Nos. 65 and 66 of Volkmann's *Klinische Vorträge* an interesting article on the Treatment of the Wounded in War, with especial reference to the first dressing, which, he considers, is often decisive for the after-course of the case. The opinions of a number of military surgeons who have had experience in recent European wars are given and the remarkable results of secondary antiseptic treatment in the Servo-Bulgarian war are noted. The general opinion seems to be that in future wars, in view of the increased number of wounded and the difficulty of attending to them quickly enough, it will not be possible to satisfy the demands of asepsis at the dressing station, and this applies with greater force to the first aid to be rendered by bearers. Profs. Billroth, Esmarch, Gurlt and the majority of army surgeons were in favour of aseptic treatment in the field hospitals of the second line, but held antiseptic dressing to be, on the whole, best on the battle-field and at the first line dressing station. The long range of the new rifles and the absence of the protection hitherto afforded by the smoke will often make it impossible to send the bearers near the fighting line, and it is very doubtful whether they will be able to do more than to bring the wounded who are unable to walk out of reach of fire as quickly as possible and then to give the necessary temporary aid. Under such circumstances and with a large number of wounded to attend to, the bearers' hands will be covered with dirt, blood and perspiration, and the application of an aseptic dressing will be impossible. The first aid dressing must be so packed as to be protected from damp, especially perspiration, and should be antiseptic (iodoform gauze). The soldiers themselves, and particularly the bearers, must be cautioned against touching any wound with their fingers, except when it is found to be

necessary to stop bleeding. The application of tourniquets by bearers is for the same reason to be avoided, especially as the triangular bandage or elastic brace is mostly efficient. Although an aseptic treatment of wounds is not practicable on the battle field and at the first dressing station, yet in any future war the aseptic treatment will attain great importance, since surgeons will be obliged, and will often be able, to help themselves by sterilising (boiling) dressings &c. The surgeons at the dressing station will sterilise the hands (especially the nails) by careful washing in water with the aid of soap and a brush, which will be followed by a 1 in 1000 solution of corrosive sublimate. The instruments will be boiled for a quarter of an hour in water, with the addition of soda if possible. Instrument cases must be made of metal or of sailcloth, which can be properly sterilised. As the demands upon the medical staff in the future will be greater than in the past, more care must be given to the training of bearers and hospital orderlies, and even the ordinary private must be taught how he may safely help himself if he becomes wounded and is out of reach of medical aid.

Use of the Electric Light for Diagnosis in Diseases of the Stomach.

At the meeting of the Berlin Medical Society on July 5th Dr. Kuttner demonstrated the use of the electric light when introduced into the stomach as a means of diagnosis in diseases of that organ. The effect of the light when seen through the abdominal wall was very remarkable in defining the curvatures of the stomach, and it would perhaps be useful in assisting the early detection of tumours on the anterior wall and other changes.

The Comma Bacillus.

Professor O. Liebreich has cautioned the profession against too readily accepting the comma bacillus as the cause of cholera. He says: "We must openly allow that, as with diphtheria and pneumonia, so with cholera, the actual cause is at present unknown. We can only see in the comma bacillus a symptom of cholera, and he who would show that it is the cause must bring more convincing proof than has at present been produced."

July 8th.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

Anchylostomum Duodenale.

THE statistics for 1892 show that at Kasr-el-Aini Hospital there were 166 cases of anchylostomiasis out of a total of 4479 admissions and 618 deaths. These figures hardly confirm Griesinger's belief that one-fourth of the whole native population of Egypt are infested by this worm. All the patients were taken from the poorest agricultural labourers and their numbers include only one woman. The bulk of the patients have been discharged cured, but about 8 per cent. have died in hospital, being generally those who were admitted in a moribund condition. The greatest number of worms found at any necropsy was 863. One peasant, who was cured by a month's treatment after having been ill from anæmia for three years, voided after the first dose of thymol 480 anchylostomes, 750 oxyurides and fifteen ascarides.

Public Health at Suez.

The weekly death returns have gone up from 25 per 1000 in May to 46 and 50 in June. This can hardly be due to the presence of unclean pilgrims, as might be supposed, because 19 out of the 23 deaths in the fortnight were in children under five years of age, the causes being broncho-pneumonia and diarrhœa. Serious steps are now being taken to improve some of the street drains, which have been an open nuisance for years. There, has, however, been no outbreak of enteric fever since August, 1891, when 16 cases occurred in the town, 8 of which were in English youths aged from eighteen to twenty-six years. One case of relapsing fever has lately been seen in the person of an English practitioner, who contracted it by studying too closely the case of a native patient in hospital.

The Drainage of Alexandria.

Alexandria became three years ago the proud possessor of a municipality, but so little good has been achieved since then that even optimists were beginning to doubt whether the experiment justified the extension as yet of municipality to other towns in Egypt; but lately the Greek men of business, who form the bulk of the councillors, have bought an excellent disinfecting stove for the use of the town and have commissioned their chief engineer, Dietrich Bey, to draw up a complete sanitary report upon the town. This has since been criticised by Herr Hobrecht of Berlin, and when the necessary survey has been completed it is hoped that something practical may be done. The town of Alexandria covers about 1200 acres and has an estimated population of 240,000, living in 20,000 houses and 5000 groups of native huts. The only water-supply comes from an open canal, which is derived from one of the branches of the Nile considerably below Cairo. This canal and its banks are fouled in every possible way, and though the English director of the water company has by his strenuous efforts so far succeeded in preventing any considerable outbreak of disease we hail with delight the fact that the company is seriously considering the advisability of removing their intake to a point much higher than at present. Besides occasionally having to dispense almost stagnant water there is every year the risk of the intake at low Nile being salted by sea-water. The present system of drains, which were laid down in 1865, is very bad and is liable also to frequent incursions from the sea, completely blocking some of the outlets. Some of the drains were originally intended only for storm-water and opened into the water-supply canal (Mahmoudieh), but little by little permission has been given to inhabitants to connect the overflow of their cesspools with the drains and thus pollute both earth and water. Besides the existing drains, which are usually nothing but conduit-like cesspools, there are 12,000 porous cesspools, few of which have any other ventilation than into the houses by means of untrapped latrines. It must not be forgotten, too, that the favourite place for a latrine is within the kitchen. It only remains to be added that most of the cesspools are never emptied and that others are cleansed only once a year. In fact the authorities do not seem to have considered the possibility of emptying them, for, according to M. Dietrich, there are only thirty-two emptying carts in Alexandria. The municipality has very wisely erected a few public latrines, as until now the poorer natives have been dependent on 138 mosques and eleven public baths, all of which are permeated by the most noxious smells. It is not surprising to read that the seventeen markets "leave much to be desired" on the score of cleanliness. In the second part of the report the various schemes for the removal of sewage are discussed and that of *tout à l'égout* recommended. The last part sketches the details of a project for draining the city, including the cost of all materials required. The initial expense is calculated at £500,000 and the annual charges of maintenance at £2800. The very excellent report is accompanied by nine sketch plans of the town and its various levels. Now that Alexandria has had the courage to take stock of her own shortcomings it is merely a question of time and money before they will be righted and the annual mortality reduced.

Cairo, June 28th, 1893.

Obituary.

ANDREW MARSHALL, M.D. GLASG., J.P.

IT is with regret that we have to place on record the death of Dr. Marshall of Preston, which took place on June 18th last, at the age of fifty-three. Dr. Marshall studied and graduated at the University of Glasgow, and commenced practice at Preston in 1864, where he obtained considerable success and the gratitude of his numerous patients. The prosperity of the Preston and County of Lancaster Royal Infirmary was largely indebted, in one way or another, to his exertions. In July, 1886, he was placed on the Commission of the Peace for the borough, and his magisterial duties were always regarded by him as involving serious responsibility. His colleagues on the bench, as well as those associated with him in the discharge of his professional duties, have to mourn the loss of one whose presence will for some time to come be sorely missed.

MEDICAL TRIAL.

ALABONE *v.* MORTON.

IN this case, a summary of which appeared in the columns of THE LANCET of June 24th last, Mr. Justice Wright announced his intention to reserve judgment until the result of inquiries made by the official solicitor were known. On the 8th inst. Mr. Justice Wright delivered judgment in the case as follows: Assuming that the plaintiff is not debarred by his conduct or the character of his business from asking the aid of the Court, I must hold that he is entitled to an injunction. I find that the defendant has pirated some of the plaintiff's cases and has made improper and dishonest use of information confidentally obtained by him in the plaintiff's service. It was objected at the bar that the plaintiff illegally practises as an apothecary—and I have no doubt he does so—and that no contract in furtherance of that illegal practice could be enforced; but this is not a question of enforcing a contract. A wrong has been done to the plaintiff which, on the assumption that I have for the moment made, does him prejudice in respect of matters not shown to be tainted with illegality, and I think he ought not to be refused relief against that prejudice merely because the giving such relief may incidentally involve a consequence of benefit to his illegal practice as an apothecary. Then, is the plaintiff debarred by his conduct or the character of his business from obtaining the aid of the Court? The inquiries which I have had made have not thrown any further doubt on the authenticity or genuineness of the plaintiff's testimonials from patients, but they have much strengthened my suspicions that some at least of the so-called press notices are not what they purport to be, and that, whatever may be the value of the plaintiff's method of treatment, it does not depend on the use of the drug lachnanthes; but I cannot act on mere suspicion, and, disbelieving as I do the defendant's evidence as a whole, I have no judicial knowledge of facts which could justify me in giving effect to those suspicions or any judicial means of obtaining such knowledge, and I have no right to deny relief or to delay it indefinitely unless on the ground of matters proved or appearing in the action. I must therefore give judgment for the plaintiff for an injunction as prayed, except as to the press notices, which Mr. Cozens-Hardy waived, and I see no ground on which I can judicially refuse costs. It is to be hoped that the proper authorities will take steps to enforce the Apothecaries' Act against both parties and to consider whether proceedings of another kind should not be taken against the defendant, whose fraud and false pretences are established by the evidence in this case, so far as that evidence can be relied on. I shall therefore give judgment for the plaintiff with costs.

UNITED HOSPITALS' ATHLETIC SPORTS.—This annual meeting took place on Saturday, July 8th, on the grounds of the London Athletic Club at Stamford Bridge. The weather, which was very unsettled, went far to spoil what would otherwise have been a very enjoyable meeting, and in consequence the attendance was smaller than in former years. In the end Guy's Hospital succeeded in retaining the Challenge Shield by nine wins to two, a result largely due to the efforts of H. A. Munro and H. T. Bell, the captain and secretary respectively of the U.H.A.C. Mr. F. Howard Marsh acted as president and Mrs. Marsh distributed the prizes. The judges were Drs. A. F. Voelcker, H. M. Fletcher and Mr. G. R. Turner. Appended are details of the events:—100 Yards: H. T. Bell, Guy's (time, 10⅖ sec.). Half-mile: P. W. James, St. Bartholomew's (time, 2 min. 2 sec.). Putting the Shot: C. Rolfe, London (distance, 35 ft. 1¼ in.). 120 Yards Hurdle Race: P. R. Lowe, Guy's (time, 17 sec.). High Jump: H. T. Bell, Guy's (height, 5 ft. 8 in.). 220 Yards: H. T. Bell, Guy's (time 23⅗ sec.). One Mile Challenge Cup: H. A. Munro, Guy's, 1; A. R. McCullagh, Charing-cross, 2 (time, 4 min. 41 secs.). Long Jump: H. T. Bell, Guy's (distance, 20 ft. 8 in.). 440 yards Challenge Cup: F. S. Batchelor, Guy's (time, 53¼ secs.). Three Miles Challenge Cup: H. A. Munro, Guy's, 1; G. R. Elwin, St. Mary's, 2 (time, 15 min. 54⅘ sec.). Throwing the Hammer: E. N. Scott, Guy's (distance, 89 ft. 5 in.). The President, in a short speech, pointed out the improvement in the standard of the performances which had taken place in the last few years and the meeting dispersed amidst the usual cheers.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the Second Examination of the Board at a meeting of the Examiners on Saturday, the 1st inst.:—

Anatomy and Physiology.—William Henry Drury and William Walter Walker, students of Yorkshire College, Leeds; Ernest Malcolm Stockdale, Hugh Hughes and Thomas William Naylor Barlow, University College, Liverpool; Henry Edward Darlington, Henry Chas. Wolfenden, Aubrey Wheeler Haines and Norman William Eley, Mason's College, Birmingham; Charles Francis Steele and John Courtenay MacWatters, University College, Bristol; Arthur Bertram Sibson and Roland Arthur Stevenson, Owens College, Manchester; William Howe Lee, Sheffield School of Medicine; George Edward J. A. Robinson, Royal College of Surgeons in Ireland, Dublin; Robert Joyce and Patrick Joseph Dempsey, Medical School, Catholic University, Dublin.

Anatomy only.—John Barton, Francis William Joynes and Sydney William May, Owens College, Manchester; Thomas Sansome and Arthur Ernest Hancock, Mason's College, Birmingham.

Physiology only.—William Edwin Heal, Yorkshire College, Leeds, and Surgeons' Hall, Edinburgh; Frederick Leonard Sessions, Owens College, Manchester; John Douglas Wilson Beavis, University College, Bristol, and Thos. Priestley, Sheffield School of Medicine. Four candidates were referred in Anatomy only, five in Physiology only, and ten in both subjects.

Passed on the 3rd inst.:—

Anatomy and Physiology.—Robert Campbell, Queen's College, Belfast; Charles Edward Morris, University College, Liverpool; William Watson Griffin, University of New Zealand and London Hospital; and George Herbert Warren, London Hospital.

Anatomy only.—Clarence Reginald Dearden and Henry England, Sheffield School of Medicine; Albert Victor Moreton, Owens College, Manchester; Arnold James Thomson, Mason's College, Birmingham; Thomas Ashby Barron, William Maclachlan McDonald, Maurice Were Coleman and William Wrangham, St. Bartholomew's Hospital; James C. R. Braine-Hartnell and Michael Kemble Tebay, Middlesex Hospital; Robert Tilbury Brown and Charles George Burton, Guy's Hospital; Alexander Baker and Frederic Herbert Sturdee, St. Thomas's Hospital; Harold Chatterton and Arthur Mayers Connell, University College, London; Robert Athelstan Draper, Cambridge University and St. Mary's Hospital; William Charles Stanham, London Hospital; and Harvey Hilliard, Charing-cross Hospital.

Physiology only.—Richard Kay, Guy's Hospital; George Richard Smith and Alfred Arthur P. Moffatt, Owens College, Manchester; Ernest Hosking Birchall, University College, Liverpool; William John Thomas, Edward Kerr Herring, and Charles James Armson, Middlesex Hospital; Francis R. M. Hegga and James Coole Kneale, Mason's College, Birmingham; Wilbye Cooper, Yorkshire College, Leeds; Frederic Anthony, University College, Bristol; Fredk. Harcourt Gervis, Charles Edwin Durrant and Paul Ransome Browning, St. Thomas's Hospital; Quintin Herbert Miller, Charing-cross Hospital; Edmund W. M. Westcott, University College, London; Thomas Crompton and John Firth Fernie, St. Bartholomew's Hospital; Guy P. U. Prior, King's College Hospital; John Winder and James Glover Heath, St. Mary's Hospital; and Cornelius Bernard German, London Hospital. Four candidates were referred in Anatomy only, four in Physiology only, and nine in both subjects.

Passed on the 4th inst.:—

Anatomy and Physiology.—Samuel R. R. Matthews, St. Mary's Hospital; Brennan Dyball, Aubrey Alfred Montague and Ernest Herbert Cobb, St. Thomas's Hospital; James Francis McCone, University of California and St. Bartholomew's Hospital; Walter Richard S. Miller, Dennys John Drake and John Rees Evans, St. Bartholomew's Hospital; Arthur Herbert Spencer, Guy's Hospital; Reginald Tuxford, University College Hospital; and Bernard Elwell Porter and David Charles Rees, Charing-cross Hospital.

Anatomy only.—Sydney Robert Walker, Westminster Hospital; Harold Edgar Fryer, Walter Byron Maurice, and James Clarke, St. Mary's Hospital; Sidney George Layman, Guy's Hospital; James Henry F. Nunn, Bernard Rowlands, and Michael Joseph Ryan, St. Bartholomew's Hospital; Henry H. P. Johnson, Alfred Ernest Walker, and Daniel Bowes Beecroft, Charing-cross Hospital; Henry White and Thomas Gill King, London Hospital; and Edwyn Robert Grazebrook, King's College Hospital.

Physiology only.—Gilbert Holland Ransome, St. George's Hospital; Thomas Edmund Rice, Thomas Ascough Hawkesworth and Olaf Fleetwood Pritchard, King's College Hospital; Gordon Ernest O. Taylor and Percy Hildebrand Collingwood, St. Thomas's Hospital; Cyril Scott Murray and Edward Hoare Sweet, St. Mary's Hospital; Frederick Rolland Baker and John Philip Prell, London Hospital; Alexander Granville, Leonard Freeman Marks, Josiah Cecil Powell and Frank Veale Bice, St. Bartholomew's Hospital; William Reginald Penny and Hugh R. F. Towne, Westminster Hospital; Herbert Llewellyn Porteous and Thomas Thomas, Middlesex Hospital; and Harold Leader, Guy's Hospital. Four candidates were referred in Anatomy only, four in Physiology only, and four in both subjects.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates have passed in the subjects indicated below:—

Surgery.—H. E. W. Andreae, University College; H. W. Beedham, London Hospital; H. C. M. Brett, King's College; J. H. Busteed, Guy's Hospital; B. E. Church, St. Bartholomew's Hospital; J. Davies, St. Mary's Hospital; F. V. Denne, Westminster Hospital;

W. H. Dixon, Guy's Hospital; G. H. Grace, St. Bartholomew's Hospital; T. Jones, London Hospital; W. Loades, Middlesex Hospital; F. W. Mawby, Guy's Hospital; C. Stewart, Durham College; J. Thornton, London Hospital; J. Unsworth, Liverpool; W. B. Welch, St. Bartholomew's Hospital; and W. H. G. Wilkes, Birmingham.

Medicine, Forensic Medicine, and Midwifery.—H. C. M. Brett, King's College; W. H. Dixon, Guy's Hospital; H. P. Job, University College; G. H. Jones, St. Thomas's Hospital; C. H. Stewart, St. Thomas's Hospital; A. G. Tribe, St. Thomas's Hospital; J. Unsworth, Liverpool; and W. Wyllys, St. Bartholomew's Hospital.

Medicine and Forensic Medicine.—S. Gresswell, St. Bartholomew's Hospital.

Forensic Medicine and Midwifery.—S. E. Price, London Hospital.

Forensic Medicine.—E. C. Adams, St. Bartholomew's Hospital; and R. W. Prentice, King's College.

The diploma of the Society, entitling the candidates to practise Medicine, Surgery and Midwifery, has been granted to the following gentlemen:—

Messrs. Adams, Brett, Church, Dixon, Grace, Jones, Loades, Prentice, C. Stewart (Durham), Tribe, Unsworth and Wilkes.

WORKHOUSE INFIRMARY NURSING ASSOCIATION.—An interesting meeting was held at Lady Wantage's house on the 11th inst. to promote the work of the Association for Providing Trained Nurses in Workhouse Infirmaries, when Lord Wantage, in the unavoidable absence through illness of her Royal Highness Princess Christian, Lord George Hamilton, M.P., Miss Turning and others spoke of the good work the Association had achieved and of the urgent need for funds to carry on and extend the work. The nurses are highly appreciated by the workhouses and infirmaries both in London and the provinces, and it is found impossible to supply the applications made for nurses for want of funds. An urgent appeal is made by the committee for the sum of £2000 with which to form a training fund. During the year 1892, 132 applications were made for nurses, of which it was only possible to respond to seventy owing to a deficiency of funds, as compared with eighty-one the year before. We have often referred in our columns to the good work done by the Association, which is well worthy of support.

BEQUESTS AND DONATIONS TO HOSPITALS.—The trustees of Smith's (Kensington estate) Charity have sent a donation of £300 towards the funds of the Metropolitan Hospital, Kingsland-road; £500 to the Great Northern Central Hospital, Holloway-road; £200 to the North-Eastern Hospital for Children, Hackney-road; and £150 to the Royal Hospital for Diseases of the Chest, City-road, London.—The Grocers' Livery Company has sent a donation of £250 to the Clarence Memorial Fund of St. Mary's Hospital, Paddington.—The Baroness Forester, late of Meaford Hall, Staffordshire, bequeathed the residue of her real and personal estate upon trust for the establishment of a cottage hospital and also a convalescent home, to be called the Forester Cottage Hospital and the Forester Convalescent Institution respectively, both as memorials of her late husband, Lord Forester.—Mr. Mellersh, late of Godalming, bequeathed 19 guineas each to the Cancer Hospital, Brompton, the Hospital for Consumption, Brompton, and the Sussex County Hospital, Brighton.—The late Miss Jane Robinson, of Halifax, bequeathed £500 to the Halifax Infirmary.—The Fishmongers' Livery Company has contributed 200 guineas to the fourth quinquennial fund of the London Hospital.—Mr. Frederick Clarke, late of Austin Friars, London, bequeathed £100 each, free of legacy duty, to King's College Hospital, Charing-cross Hospital and St. Mary's Hospital, Paddington.—On the 17th ult. a house collection for the medical charities of the city of Oxford produced £85 7*s.* 7*d.*—Messrs. Bass and Co. of Burton-on-Trent have contributed 100 guineas towards the fourth quinquennial fund of the London Hospital.—The City of London Corporation has made a grant of 100 guineas to the Seamen's Hospital Society, *Dreadnought*, Greenwich.—The late Mr. Albert Levy bequeathed £200 each to the Margate Cottage Hospital and the Royal Sea-bathing Infirmary, Margate.—Mr. Wm. F. Harvey, late of Farlington, Hants, bequeathed £100 each to the Lincoln Hospital, the Bradford Infirmary and the Wakefield Dispensary and Clayton Hospital.—The honorary treasurer of the North Ormesby Cottage Hospital has received £60 from the workmen employed at the Allhusen Saltworks, Port Clarence.—The late Mr. Chas. Proctor of Aislaby, Yorkshire, bequeathed £100 each to the Lincoln Hospital, the Bradford Infirmary and the Wakefield Dispensary and Clayton Hospital.—Mr. Samuel Pearson Ashworth, late of Headingley, Leeds, bequeathed £1000 to the Leeds Infirmary and £200 each to the Leeds Dispensary and the Leeds Women and Children's Hospital.

MEDICAL MAGISTRATE.—Dr. Job M. Hughes of Ruthin has been placed on the Commission of the Peace for the county of Denbigh.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—At the annual general meeting of the above Society, held on Friday, the 7th inst., Mr. F. Swinford Edwards, President, in the chair, the report of the secretaries showed the Society to be in a highly satisfactory condition. The average attendance during the past session had amounted to forty-three, thirty-four new members had been admitted, whilst the Society regretted the loss of five by death—namely, Drs. H. C. Andrews, C. E. Cotes, W. B. Hadden, and J. Ingleby Mackenzie, and Mr. Charles Vasey. Under the able treasurership of Mr. Gunton Alderton the funds of the Society were shown to be in a most favourable state. The officers selected for the ensuing year are as follows:—President: Dr. Donald W. C. Hood. Hon. Vice-Presidents: Mr. Keetley, Dr. Travers, Dr. Campbell Pope, Mr. T. Gunton Alderton, Dr. Chas. Wells, Mr. Swinford Edwards, Mr. Leonard Mark, Dr. Symons Eccles, Mr. Bruce Clarke, and Mr. J. Herbert Menzies. Council: Dr. Abraham, Dr. J. B. Ball, Dr. Banning, Mr. W. Steer, Dr. C. W. Chapman, Dr. Clippingdale, Mr. H. P. Dunn, Dr. W. T. Gardner, Mr. Rickard Lloyd, Dr. Masters, Dr. Schacht and Dr. Henry Sutherland. Treasurer: Mr. T. Gunton Alderton. Secretaries: Dr. A. Clemow and Mr. Richard Lake. Librarian: Dr. Schacht.

FORFARSHIRE MEDICAL ASSOCIATION.—The thirty-fifth annual general meeting of the Forfarshire Medical Association was held in the chemistry class-room, University College, Dundee, on Thursday, June 29th, Dr. Rorie, the President, in the chair. There was a large attendance, including Drs. J. W. Miller, Sinclair, Macewan, Templeman, Steven, M'Gillivray, Mackie Whyte, Johnstone, Robert Miller, Pirie, Paterson, Buist, Kynoch, Stalker, Lennox, Peter Campbell, James Miller, Duncan, A. M. Anderson, Chisholm Clark, M. F. Anderson and Alexander Campbell (Dundee); Drs. Lawrence, Howden, Havelock and Urquhart (Montrose), Dr. Grant (Glamis), Dr. Robertson (Errol), Dr. Alexander (Forfar), Dr. Dickson (Carnoustie), Dr. Keith Anderson (Arbroath) and Dr. Geo. B. Murray (H.M.S. *Unicorn*). The treasurer having read the financial statement, which showed a substantial balance to the credit of the Association, Dr. Rorie delivered his presidential address on the Importance of the Individual Vitality of the Organic Unit in Health and Disease. His thesis was a defence of the principle of vitalism in opposition to the chemico-physical theory of mere metabolism as being sufficient to explain the phenomena of life. The subject was treated in an able and suggestive manner, and at the close of the address Dr. Howden, in proposing a vote of thanks to the lecturer, expressed the hope that the paper might be published so that each member might receive a copy. The office-bearers for the year were then elected as follows: President, Dr. Russell (Arbroath); Vice-Presidents, Dr. Macewan (Dundee) and Dr. Dickson (Carnoustie); committee, Drs. Chas. Moon, J. W. Miller, Buist, Waymouth Reid and D. M. Greig Lennox; secretary, Dr. Peter Campbell; treasurer, Dr. M'Gillivray; local secretaries, Dr. Key (Montrose), Dr. Laing (Arbroath), Dr. Cable (Forfar), and Dr. Leishman (Brechin). Dr. Mackie Whyte, the retiring treasurer, was cordially thanked for his services during his seven years' tenure of office. It was agreed that an abstract of the proceedings of the annual meeting should be printed and distributed to the members and that the usual donation of five guineas should be given to the British Medical Benevolent Fund. The members of the Association afterwards dined together in the Queen's Hotel, with Dr. Rorie as chairman. There were present as guests Professor T. R. Fraser (Edinburgh), Professor M'Call Anderson (Glasgow), Professors Frankland, D'Arcy, Thompson and Geddes (University College), Dr. Douglas (Cupar), Dr. Murray (H.M.S. *Unicorn*) and Mr. Walter Campbell. Letters of apology were received from Professor M'Kendrick, Professor Macintosh, Dr. Joseph Bell, Surgeon-Captain Moir, A.M.D., and Dr. Raw. After the usual loyal and patriotic toasts had been honoured the chairman gave "Our Guests," to which Professor M'Call Anderson replied. "The Forfarshire Medical Association" was given by Professor Fraser and responded to by Dr. Lawrence. Other important toasts were: "The Universities," by Dr. Sinclair, replied to by Professor Geddes; "Kindred Associations," by Dr. J. W. Miller, for which Dr. Douglas replied; and "The Infirmaries and Asylums of Forfarshire," proposed by Dr. Keith Anderson and responded to by Dr. Howden. The meeting was in every respect a success

AT the quarterly meeting of the directors of the Naval Medical Supplemental Fund, held on the 11th inst., Mr. T. Russel Pickthorn, Inspector-General, in the chair, the sum of £64 was distributed amongst the several applicants.

MILLER HOSPITAL, GREENWICH.—The annual dinner in aid of the funds of this hospital was held last week at the Grand Hotel, Trafalgar-square, under the presidency of the Lord Mayor. The chairman, appealing for funds on behalf of the hospital, said there were many calls upon the institution owing to the number of accidents and cases of illness which occurred in the district, which was populated by a large number of poor people. The number of beds in the hospital numbered but twenty-four, which was very few to meet the necessities of such an overcrowded district. In 1892 the number of patients relieved numbered 12,700 and last year 14,000 received attention. Year by year the number of patients increased, but the accommodation remained the same. In the first year of the hospital's existence fifty-four cases of accident were relieved. Last year the number was 3267.

ROYAL COLLEGE OF SURGEONS IN IRELAND: SCHOOLS OF SURGERY.—The following is the prize list for the summer session, 1893:—*The Barker Anatomical Prize:* Mr. Asher Leventon, 1892, £21; Mr. E. J. Moore, 1893, £21. *The Mayne Scholarship:* Mr. W. Taylor, £15. *Operative Surgery:* Mr. W. Taylor, first prize, gold medal; Mr. H. R. Sweeny, second prize, silver medal. *Practical Chemistry:* Mr. T. A. E. Rooke, first prize (cheque) and medal; Mr. J. J. O'Sullivan, second prize (cheque) and certificate. *Practical Histology:* Mr. G. E. Robinson, first prize (cheque) and medal; Mr. H. B. S. Montgomery, second prize (cheque) and certificate. *Materia Medica:* Mr. M. Moore, first prize (cheque) and medal; Mr. C. E. Hodgson, second prize (cheque) and certificate. *Practical Pharmacy:* Miss S. L. Glynn, first prize (cheque) and medal; Mr. J. Campbell, second prize (cheque) and certificate. *Forensic Medicine:* Miss J. B. Ferguson and Mr. Asher Leventon, equal, first prize (cheques) and medals; Miss E. L. Micheson and Miss A. M. Thornett, equal, second prize (cheques) and certificates.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The Royal Commission on the Opium Traffic.

THE Royal Commission on the Opium Traffic will commence its investigations in London, where it is understood it will deal with the documentary evidence on the subject. It is not yet decided whether the whole Commission will proceed to India or whether a committee will be sent to make the investigations.

The Plumbers' Registration Bill.

The following names have been added to the Standing Committee on Trade for the consideration of the Plumbers' Registration Bill: Mr. Benn, Sir A. Borthwick, Mr. A. C. Corbett, Earl Compton, Mr. Dixon, Mr. Farquharson, Mr. Frye, Mr. Keir Hardie, Mr. Hopwood, Mr. Kimber, Mr. Lees Knowles, Mr. Maden, Sir F. S. Powell, Mr. Wolff, and Mr. Bowen Rowlands. Mr. Dunn has taken the place of Mr. M'Lagan.

The Vaccination Question.

Mr. Hopwood has given notice of several questions with regard to vaccination. They are addressed to the Under-Secretary for India and will probably be answered next week. One has reference to Surgeon-Major King and the use by him of lymph not now sanctioned by the Government. Another refers to Mr. Haffkine's experiments at Agra. Mr. Hopwood wants to know whether Mr. Haffkine inoculated with cholera virus some 250 soldiers and children and whether the Government will forbid such experiments.

The Police and Sanitary Bills.

The Select Committee on these Bills terminated their sittings for the session on Tuesday last. Fifteen measures have been dealt with. A special report is to be presented to the House suggesting the appointment of an official adviser of the committee who would bear the same relation to the committee as that of Parliamentary agent to promoters of the Bills referred to the committee. It is also suggested that a circular should be issued by such a department as the Local Government Board for England and Wales, or in the case of Scotland the Scotch Office, to every local authority, containing the terms of instruction of the House of Commons and calling the attention of the local authorities to the necessity of confining their proposals within the limits laid down by Parliament. This course would, it is believed, save both the time and money now wasted on the presentation of Bills containing proposals which the committee feel they are debarred under the instruction from entertaining.

THE HOUSE OF COMMONS.

THURSDAY, JULY 6TH.

Colour-Blindness.

Dr. Macgregor asked whether the attention of the President of the Board of Trade had been drawn to the report of the Royal Society on the best methods of testing for colour-blindness amongst railway servants and mariners, and whether any steps had been taken to secure efficiency in the methods adopted to test the eyesight of such employés.—Mr. Mundella said attention had been drawn to the subject with respect both to seamen and railway servants. For the former class a revised system of colour tests was being prepared, and with regard to railway men a circular letter on the matter had been addressed to all the railway companies. When the correspondence was completed the Board would consider the propriety of laying it before Parliament.

FRIDAY, JULY 7TH.

The Opium Commission.

Several members made inquiries respecting this Commission, and a summary of the replies given by Mr. G. Russell was to the effect that the arrangements for conducting the inquiry were not yet settled; that it might probably be necessary that the Commission should visit India and take evidence there; and that proper steps would be taken to ascertain the opinion of natives on the subject. It was hardly likely, said the right hon. gentleman, that the inquiry would extend to China.

Sheet Enamelling.

In reply to a question put by Mr. Burns, who desired to draw attention to the dangerous nature of the above-named industry, by which the death of a girl had resulted, Mr. Asquith said that special investigation had been made into the case in question and the result had been communicated to him, and would be brought under the notice of the Committee now charged with the duty of ascertaining particulars concerning the white-lead industry.

Insanitary Houses in Lambeth.

Sir J. Hibbert made a somewhat lengthy statement in reply to a series of questions put by Mr. Lough as to the insanitary condition of certain houses in Lambeth parish. It would appear that the houses in question belong to the Duchy of Cornwall and that a complaint had been made regarding their unhealthy condition, which complaint had been replied to by the secretary of the Duchy, who forwarded his reply to the Prince of Wales's council. According to the committee which investigated the matter, it would seem that the houses referred to, though objectionable in construction, were not in such a condition as to warrant the interference of the local authorities. During the last seven years some £32,000 had been spent by the Duchy on the removal of inferior dwellings and the erection of improved buildings in Lambeth, and the improvements were still in progress.

MONDAY, JULY 10TH.

The Opium Commission.

Mr G. Russell, in answer to Mr. Curzon, said that the Commissioners would be appointed as soon as possible, but the matter required most careful consideration and no date could be named at present. The Commission would be issued in the name of the Queen and its sittings would not necessarily be confined to India.

Ventilation of the Lobbies.

In answer to Sir G. Chesney, Mr. Shaw-Lefevre said he was fully sensible of the inconvenience caused to hon. members by the great heat of last week and the crowded state of the division lobbies and had already given orders for various alterations for the admission of a greater amount of air. The right hon. gentleman said he must again suggest that the inconvenience felt by hon. members might be greatly reduced by clearing the House more quickly after divisions were closed. Three or four minutes might easily be saved in that way.

Importation of Canadian Cattle.

Mr. H. Gardner intimated that he proposed to lay on the table some papers on this subject. He had made inquiry as to whether coloured drawings of the diseased lungs could be made, but he was informed that owing to the lapse of time and the alterations in colour which had occurred such drawings would be of no practical value.

Railway Servants (Hours of Labour) Bill.

On the motion of Sir M. Hicks-Beach, one of the House of Lords' amendments was amended by providing that the Act should not apply to any servant of a railway company who in the opinion of the Board of Trade was wholly employed in clerical work or in the company's workshops. The other amendments were agreed to.

Rivers Pollution Prevention Bill.

This Bill was read a second time.

TUESDAY, JULY 11TH.

Ventilation of the Houses of Parliament.

In reply to Sir H. Roscoe, Mr. Shaw Lefevre expressed his pleasure that the honourable member had called attention to the subject, as it was one of considerable importance to honourable members. The right hon. gentleman stated that a Select Committee in July, 1891, recommended that the County Council should consider the desirability of improving the sewer ventilation in the neighbourhood of the Houses of Parliament by the erection of shafts and furnaces to create powerful exhausts, in order that the gratings at the ground level might become inlets for air instead of outlets for sewer gases. Repeated communications had been made to the County Council, but they had up to the present been unable to find a suitable site for the purpose of carrying out the proposals.

The Value of the Rupee.

Replying to a question on the gold value of the rupee, Mr. G. Russell stated that the Secretary of State in Council had sold bills at the

highest price tendered, which had lately been slightly below 1s. 4d. The object of the recently adopted measures was to prevent a further fall rather than to raise the gold value of the rupee, not to fix the gold value at 1s. 4d. or any other ratio. The notification respecting the issue of rupees in exchange for gold at the ratio of 1s. 4d. would be inoperative until and unless the gold value of the rupee reached that sum. The object of the notification was by fixing a maximum limit beyond which exchange should not at present rise, to prevent any possible disturbance of trade by a sudden and considerable increase in the gold value of the rupee.

THURSDAY, JULY 13TH.

Metropolitan Asylums Board.

Mr. Cohen asked the President of the Local Government Board whether he could state to the House the number of patients suffering from small-pox, diphtheria and scarlet fever who were refused admission owing to want of space in the hospitals controlled by the Metropolitan Asylums Board during the month of June last, and whether he would grant a return of such refusals during each of the twelve months from July, 1892, to June, 1893.—Mr. Henry Fowler replied that the managers of the Board informed him that no small-pox cases had been refused admission for many years past. In regard to scarlet fever and diphtheria cases he learned that the information asked for could not be obtained without laborious and lengthy analysis of all the applications received, as no system of registration had been adopted. Such a return, moreover, would not give the actual number of persons refused admission, as applications were made by several persons in respect of the same patient and there were repeated applications.

IN THE COMMITTEE ROOMS.

THE REGISTRATION OF MIDWIVES.

THE Select Committee of the House of Commons appointed to inquire into the subject of the registration of midwives resumed its inquiry on Friday, July 7th. Mr. Fell Pease, Chairman of the Committee, presided.

The Chairman read a letter he had received from Mr. Braxton Hicks. The writer said he desired to supplement the evidence he had given before the Committee by calling attention to the practice of a certain class of women, who professed to be, and acted as, midwives, of setting up private establishments for the lying-in of women. What went on in them was a matter with him of more than suspicion. He would like to see some provision for registering and supervising them.

Dr. W. WILLIAMS of Cardiff, medical officer of health for the county of Glamorgan, was the first witness examined. He read to the Committee extracts from a report he had made as to the abnormal number of cases of puerperal fever in the district known as the Garw and Ogmore Valley, a district where the women were in nearly every case attended by midwives. Between May, 1888, and the end of June, 1893, no fewer than thirty-two deaths were certified from puerperal fever and puerperal peritonitis, the population of the district being 13,000. Nearly all the confinements in this and similar districts of the county were attended, Dr. Williams said, by professional midwives who had not been trained, who held no certificates and who took no precautions against carrying infection from one case to another. He had lately been through this particular district, which was a mining one, and he had come to the conclusion that the midwives knew absolutely nothing about antiseptics. After attending one case of puerperal fever the midwife went to the next confinement as if nothing unusual had happened. This state of things continued until three months ago, when the medical officer of health intervened and stopped it. Witness had made certain recommendations to the Sanitary Committee of the County Council, including, amongst others, that a midwife after attending a case of puerperal fever should not be allowed to attend another confinement until an interval of two months had elapsed, that midwives should be instructed how to disinfect themselves and their clothing, that the bedding and clothing and room of each patient should be properly disinfected by competent persons, and that the training of nurses for midwifery cases especially should receive the attention of the County Council. There were no lying-in hospitals at Cardiff, only general hospitals; but he believed that classes in midwifery were being started in connexion with the union workhouse. He desired to see a proper system of registration of midwives, and with such a system he would restrict the practice of midwifery to women who had proved their competence. In the Garw and Ogmore Valley it would be possible for medical practitioners to attend all the confinements, for there were six medical men in the valley, but it was not the rule to employ them. The midwives acted both as nurse and midwife, and they attended on each woman say for a week, charging 15s. A medical man would charge the same sum for, perhaps, four visits, and the woman would require the services of a nurse as well. In his opinion the presence of a properly trained and qualified midwife would be of the greatest possible value to a medical practitioner. Moreover, she would be better able than an untrained woman to detect when the services of a medical man were required, and would be more likely to send for one. He thought that a lying-in ward might be associated with the workhouse infirmary at Cardiff, and in this way about six students in midwifery could be instructed at a time.

By Dr. Farquharson: He regarded what had taken place in this valley recently as an epidemic of puerperal fever, and he attributed it to want of knowledge on the part of these midwives and the absence of proper precautions.

By Mr. Stephens: These women simply went from place to place spreading the disease.

By Mr. J. A. Bright: He did not think they would object to training; on the contrary, he thought they would be glad to obtain it, and he meant to bring the matter before the County Council.

By Dr. Farquharson: He had no reason to believe that the medical men of the district would dread injurious competition if trained and experienced midwives were introduced.

Miss ANNIE MCCALL, M.D. Bern, was the next witness. She was of opinion that midwives should be certified from the place of training and then should undergo an examination. Certified midwives would work hand-in-hand with medical practitioners, so that in a case of puerperal fever one would be called in at once. She did not think that certified midwives would be hurtful to medical men in their practice, because, apart from the question of fees, there was a preference on the part of women to be attended by midwives.

By Dr. Farquharson: She had very rarely been called in where there was an untrained midwife in attendance. Untrained midwives rarely called in medical men.

By Sir Frederick FitzWygram: In her opinion three months should be the minimum period for the training of a well educated woman.

By Mr. J. A. Bright: As certified midwives appeared in a district the uncertified ones would gradually disappear.

Miss LEAH GARRATT, late of the Gotherington district of Gloucestershire, expressed the view that it was only a question of money whether a medical man or a midwife was called in. She would have all midwives registered and would teach them ordinary nursing as well as midwifery, and she was confident that people would give up employing ignorant and untrained women very quickly.

Mrs. BEDINGFELD, certified midwife and nurse matron of the Garrison Women's Hospital at Shoeburyness, desired to give her testimony in favour of the registration of midwives. Untrained women did an untold amount of permanent injury, to say nothing of the pain and discomfort they caused. In their ignorance they looked down upon trained nurses and modern midwifery. She had been in practice since 1878 and had never had a case of puerperal fever.

By Mr. Stephens: Uneducated midwives had very peculiar notions as to feeding children. They gave them all sorts of rubbish, butter and sugar, and they gave them drugs to keep them quiet, often with most serious consequences.

By the Chairman: They inculcated habits of intemperance. It was an axiom with them that spirits were necessary to the well-being of the mother; they must give her a glass of "something hot." Many a woman had been made a drunkard in this way. Not long ago a woman who had previously been attended by untrained midwives assured witness that she could not get on without gin. In another case a woman said she had been in the habit of having alternate glasses of hot gin-and-water and stout until she was perfectly intoxicated. In a third case she was asked what stimulants would be required, the people adding that on former occasions they had brought in a bottle of brandy, one of gin and one of port.

By Mr. J. A. Bright: The reason why they were fighting for registration was that the people did not recognise the difference between qualified and unqualified midwives. At present in Shoeburyness the unqualified woman received as high fees as the qualified one.

By the Chairman: She suggested that there might be schools for training midwives in connexion with workhouses, and she felt confident that if the fees were low enough many women would go to them for instruction.

By Mr. J. A. Bright: She would have the word "midwife" protected by law. She would not allow an unqualified woman to call herself a midwife. She would allow six months after the passing of the Act for women to qualify if they chose. She would make them pass an examination.

By Mr. Stephens: She admitted that it might be a rather cruel thing to ask a man or a woman in middle age to pass an examination.

By Mr. Tatton-Egerton: She would be satisfied with an oral examination if it were thorough.

By Mr. Stephens: She would compel the public to employ none but registered midwives.

With the remark by Mr. Stephens that this proposal was quite new, the proceedings were brought to a close for the day.

BOOKS ETC. RECEIVED.

BALE, JOHN, & SONS, Great Titchfield-street, London, W.
On Chorea, or St. Vitus's Dance, in Children. By O. Sturges, M.D., F.R.C.P. Second Edition. 1893. pp. 188. Price 5s.

BELL, GEO., & SONS, York-street, Covent garden, London.
Mountaineering. By Claude Wilson, M.D. Illustrated. 1893. pp. 208. Price 2s.

GRIFFIN, C., & CO., Exeter-street, Strand, London, W.C.
The Physiologist's Note-book; a summary of the present state of Physiological Science for the use of Students. By Alex. Hill, M.D. Illustrated. 1893. pp. 200.

KEGAN PAUL, TRENCH, TRÜBNER & CO., Charing-cross-road, London.
On the Chemistry of the Blood. By the late L. C. Wooldridge, M.D.; arranged by V. Horsley, B.S., F.R.C.S., and E. Starling, M.D., M.R.C.P. With Introduction by Victor Horsley. 1893. pp. 354. Price 16s.

LEWIS, H. K., Gower-street, London, W.C.
A Contribution to the Pathology of the Vermiform Appendix. By T. N. Kelynack, M.D. Illustrated. 1893. pp. 223. Price 10s. 6d.
What to do in Cases of Poisoning. By William Murrell, M.D., F.R.C.P. Seventh Edition. 1893. pp. 276. Price 3s. 6d.
Tooth Extraction; a Manual on the Proper Mode of Extracting Teeth. By John Gorham, M.R.C.S. Fourth Edition. 1893. pp. 43.
A Text-book of Medicine. By Dr. Adolf Strümpell. Second American Edition. By H. F. Vickery and Others. Illustrated. 1893. pp. 1043.

LONGMANS, GREEN & CO., London.
Manual of Bacteriology. By Dr. S. L. Schenk; translated from the German, with an Appendix, by W. R. Dawson, M.D. Dubl. Illustrated. 1893. pp. 310. Price 10s. net.

OFFICE OF THE BRITISH AND COLONIAL DRUGGIST, 42, Bishopsgate-without, London, E.C.
Practical Dentistry, Surgical and Mechanical. By a Dental Surgeon. Illustrated. 1893. pp. 94.

REEVES & TURNER, Chancery-lane, London.
The Law of Cremation; an Outline of the Law relating to Cremation, Ancient and Modern. By A. Richardson, Solicitor. 1893. pp. 187.

SIMPKIN, MARSHALL & CO., London.
A Short Manual of the Bath Mineral Waters. By A. E. Fox, M.B., F.R.C.P. Edin. Second Edition, with Plans. 1890. pp. 105.

SMITH, ELDER & CO., Waterloo-place, London.
Dictionary of National Biography. Edited by Sidney Lee. Vol. XXXV. (MacCarwell—Maltby.) 1893. pp. 447.

STANFORD, EDWD., Cockspur-street, Charing cross, London, S.W.
A Comprehensive Scheme for Street Improvements in London, accompanied by Maps and Sketches. By A. Cawston, A.R.I.B.A. 1893. pp. 136. Price 21s.

SOCIÉTÉ D'ÉDITIONS SCIENTIFIQUES, Paris.
Guide de Diagnostic Gynécologique à l'Usage des Praticiens. Par Dr. le Berlin (de Nice). Avec une Préface par le Dr. Auvard. Illustré. 1893. pp. 224.
Introduction à l'Etude des Lois Générales de l'Hypodermie. Par Jules Chéron. 1893. pp. 555.
Les Kolas Africains: Monographie Botanique, Chimique, Thérapeutique et Pharmacologique. Par Dr. E. Heckel. 1893. pp. 406.

THACKER, W., & CO., Newgate-street, London, E.C.
The Points of the Horse: a Familiar Treatise of Equine Conformation. By M. Horace Hayes, F.R.C.V.S. Illustrated. 1893. pp. 379.

THE VEGETARIAN PUBLISHING OFFICE, Memorial Hall, Farringdon-street, London, E.C.
Sunshine and Shadow"; or, the Fruits of Failure. By Arnold F. Hills. pp. 545. Price 2s. 6d.

Catechism Series: Physiology, Part II.; Materia Medica, Part IV. (E. & S. Livingstone, Edinburgh, 1893); price 1s. each net.—Inquests at the Radcliffe Infirmary (James Parker & Co., Crown-yard, Oxford).—Milk, its Adulteration and Relation to Infectious Diseases, with Remarks on Food Adulteration in General: by W. Anderson, A.M., M.D., M.R.C.P.Lond.; reprint from Proceedings of California Sanitary Convention, April, 1893.—The Physics of the Cranial Circulation and the Pathology of Headache, Epilepsy and Mental Depression: by A. Haig, M.A., M.D.Oxon., F.R.C.P. (J. Bale & Sons, London, 1893).—A Short History of the Lives of Bombay Opium Smokers: by Rustom Pestanji Jehangir (J. B. Marzban & Co., Bombay).—Sanitary Engineering in India, for the Use of Municipalities and Engineers: by J. Wallace, C.E., Bombay (Education Society's Press, Bombay, 1893).—Everybody's Guide to Music: by Josiah Booth (Saxon & Co., London; price 6d.).—The Sixth Annual Report of the United Committee for the Prevention of the Demoralisation of Native Races by the Liquor Traffic (Harrison & Sons, St. Martin's-lane, London).—Another "Scientific" Bubble Burst: the Hyderabad Chloroform Commission; reprint (Spottiswoode & Co., London).—Deformities of the Nasal Septum and their Influence in Disease of the Ear and Throat: by William Scheppegrell, M.D. (reprint from the June number of the New Orleans Medical and Surgical Journal).—Journal of the Marine Biological Association of the United Kingdom, May, 1893 (Adlard & Son, London); price 3s. 6d.—The American Journal of the Medical Sciences, July, 1893 (Lea Brothers & Co., Philadelphia, 1893).—Writings: by J. Baum Pike, 1893 (Norton & Co., Nottingham); price 1s.—Ventilation; a paper read at the Royal United Service Institution, Whitehall, London, December, 1892; reprint (Bemrose & Sons, London).—The Veterinary Journal: Edited by George Fleming, C.B., LL.D., F.R.C.V.S.; July, 1893 (Baillière, Tindall & Cox, London, price 1s. 6d.—The British Journal of Dermatology, July, 1893 (H. K. Lewis, London); price 1s.—The Phrenological Magazine, July, 1893 (L. N. Fowler & Co., London); price 6d.—Cholera Infantum: by E. Meinert, M.D.Dresden; reprint (J. Wright & Co., Bristol).—Proceedings of the State Sanitary Convention at San Francisco, April, 1893 (H. S. Crocker Co., Sacramento, 1893).—A Case of Hypertrophic Pulmonary Osteo-Arthropathy: by J. W. Springthorpe, M.D. Melb., M.R.C.P. Lond.; reprint (Stillwell & Co., Melbourne, Victoria, Australia).—La Clinica Chirurgica, Anno I., 1893: Estratto (F. Vallardi, Milano).—Journal de Médecine, de Chirurgie et de Pharmacologie: Annales, Tome II., Fascicules 2 et 3 (H. Lamertin, Bruxelles, 1893).—Royal University of Ireland: the Calendar for the year 1893 (Alex. Thom & Co., Dublin).—Magazines for July: Sunday at Home, Leisure Hour, Boy's Own Paper, Boy's Out-door Games and Recreations, Girl's Own Paper, Girl's Own Out-door Book (Religious Tract Society).

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

APTHORP, F. W., L.R.C.P.Edin, M.R.C.S., has been appointed Medical Officer for the Fifth Sanitary District of the Cuckfield Union.

BRANDER, THOS., M.B., M.S.Aberd., has been appointed Medical Officer to the Parochial Board of Drainie.

BROWNE, RALPH H., L.R.C.P., M.R.C.S., has been appointed Physician to the Chelsea, Brompton and Belgrave Dispensary, vice R. Haynes Lovell, resigned.

BRYAN, THOS. L., M.B.Durh., has been appointed Medical Officer for the Brough Sanitary District of the East Ward Union.

ELLISTON, G. S., M.R.C.S., has been appointed Medical Officer for Seamen for the Port of Ipswich.

GODSON, A. H., B.A., M.B. & B.C.Cantab., has been appointed House Surgeon to the Croydon General Hospital, vice T. A. Dukes, resigned.

GOODING, M. R., L.R.C.P.Lond., M.R.C.S., has been appointed Medical Officer of Health for the Bideford Urban Sanitary District, vice Ackland, resigned.

HICKEY, WM. L., M.D., B.Ch. Dub., has been appointed Medical Officer for the Gainford Sanitary District of the Teesdale Union.

HIND, ALBERT, L.R.C.S., L.M.Edin., has been reappointed Medical Officer of Health for the South Molton Urban Sanitary District.

HODGSON, HAROLD, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Bilsworth Sanitary District of the Towcester Union.

HOGARTH, A. A., M.B., C.M.Glasg., has been appointed Medical Officer for the Third Sanitary District of the Cheltenham Union.

KING, ARTHUR, L.D.S R.C.S., has been appointed Honorary Dental Surgeon to the Royal Surrey County Hospital, Guildford.

LAWSON, THOS. C., M.R.C.S., has been appointed Medical Officer for the Warboy's Sanitary District and the Wistow Sanitary Districts of the St. Ives Union.

MACKENZIE, A. G., M.R.C.P., L.M., F.R.C.S.Edin., has been reappointed Medical Officer for the Third Sanitary District of the Church Stretton Union.

MAIR, L. W. DARRA, M.D.Lond., D.P.H. Lond., M.R.C.S., L.R.C.P., has been appointed Medical Officer of Health of the Croydon Rural Sanitary Authority.

MAURICE, G. T. K., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the First Sanitary District and the Workhouse of the Marlborough Union.

MCCAUSLAND, A., M.D., M.R.C.S., L.R.C.P.Lond., has been appointed Certifying Surgeon under the Factory Act for the Swanage District.

MUNDEN, CHAS, M.R.C.S., has been reappointed Medical Officer for the Third (C.) Sanitary District of the Langport Union.

POLLOCK, W. RIVERS, M.B. & B.C. Cantab., M.R.C.P. Lond., has been appointed Assistant Obstetric Physician to the Westminster Hospital.

PORT, ARTHUR WILLIAM, M.B., B.S., M.R.C.S., L.R.C.P., has been appointed House Surgeon to the Monkwearmouth and Southwick Hospital.

RENDLE, ARTHUR R., has been appointed House Surgeon to the Infirmary, Leicester.

RICHARDS, H. M., M.D.Lond., L.R.C.P., M.R.C.S., has been appointed Medical Superintendent of the City Hospital, Birmingham.

ROBINSON, E. S., L.R.C.P.Lond., M.R.C.S., has been appointed Medical Officer of Health for the Stourport Urban Sanitary District of the Kidderminster Union, vice Cadogan-Masterman.

ROSS, CHAS. E., L.R.C.P., L.M., L.R.C.S. Irel., has been appointed Medical Officer for the Tenbury Sanitary District and the Workhouse of the Tenbury Union.

STOKOE, B. T., M.B., B.S.Durh., has been appointed Medical Officer of Health for the Borough of Gateshead.

TUCKER, ROBERT G., L.R.C.P., L.M.Edin., M.R.C.S., has been reappointed Medical Officer for the Third Sanitary District of the Dartford Union.

WATERHOUSE, HERBERT F., M.D. C.M.Edin., F.R.C.S., has been appointed Surgeon to Out-patients, Victoria Hospital for Sick Children, Chelsea.

WILLIAMS, R. P., L.R.C.P., L.R.C.S.Edin., D.S.M., R.C.P.Irel., has been appointed Medical Officer to the *employés* of the Holyhead Post-office.

WILLS, WILLIAM ALFRED, M.D. Lond., M.R.C.P.Lond., M.R.C.S., has been appointed Assistant Physician to the Westminster Hospital.

Vacancies.

For further information regarding each vacancy, reference should be made to the advertisement (see index).

ASYLUM FOR IDIOTS, Earlswood, Redhill, Surrey.—Assistant Medical Officer. Salary £150 a year, with board and residence. Applications to the Secretary, 38, King William-street, London-bridge, E.C.

CHARING-CROSS HOSPITAL, W.C.—Assistant Surgeon.

COUNTY ASYLUM, Lancaster.—Assistant Medical Officer, who shall act as Pathologist (unmarried). Salary £100, increasing by annual instalments of £25 to £200 per annum, with furnished apartments, board &c.

COUNTY ASYLUM, Lancaster.—Clinical Assistant for six months. Board, lodging &c. provided.

FARINGDON UNION.—Medical Officer and Public Vaccinator for the Buckland District of the Union. Salary £126 per annum, with extra fees for operations &c. Applications to Mr. G. J. Haines, the Clerk, Faringdon.

GENERAL HOSPITAL FOR SICK CHILDREN, Pendlebury, Manchester.—Junior Resident Medical Officer, for one year. Salary £80 per annum, with board and lodging.

GENERAL INFIRMARY, Leeds.—Resident Medical Officer. Salary £100 per annum, with board, washing and lodging.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway-road, N.—House Surgeon. Salary £60 per annum, with board and lodging in the hospital.

GREAT YARMOUTH HOSPITAL.—House Surgeon. Salary £90 per annum, with board and lodging, but no wines, spirits, beer &c. are found.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident Medical Officer. Salary £200 per annum, with board and residence.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury, W.C.—Assistant House Surgeon (non-resident), for six months. Salary £20.

LEWES DISPENSARY AND INFIRMARY AND VICTORIA HOSPITAL, Lewes.—Resident Medical Officer. Salary £100 per annum, with furnished apartments, coal, gas and attendance.

LIVERPOOL CHILDREN'S HOSPITAL, Myrtle-street.—Locum Tenens House Surgeon, for one month.

MACCLESFIELD GENERAL INFIRMARY.—Junior House Surgeon. Salary £70 per annum, with board and residence in the institution.

MANCHESTER ROYAL INFIRMARY.—Resident Medical Officer (unmarried) for one year. Salary £150 per annum, with board and residence.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, N.E.—Resident Clinical Assistant.

NOTTINGHAM BOROUGH ASYLUM.—Second Assistant Medical Officer, unmarried. Salary £100 per annum, with apartments, board and washing.

POPLAR HOSPITAL FOR ACCIDENTS.—Assistant Resident House Surgeon. Salary £80 per annum. Board and lodging provided.

ROCHDALE INFIRMARY AND DISPENSARY.—House Surgeon (unmarried). Salary £80 per annum, with board and residence.

ROYAL FREE HOSPITAL, Gray's-inn-road.—Assistant Physician to Outpatients only.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, E.C.—Physician.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, E.C.—Assistant Physician.

ROYAL PORTSMOUTH, PORTSEA AND GOSPORT HOSPITAL, Portsea.—Assistant House Surgeon for six months. Board residence and washing, and an honorarium of 15 guineas at the expiration of that term.

ROYAL SOUTH HANTS INFIRMARY, Southampton.—Assistant House Surgeon. Board and rooms provided.

STOCKPORT INFIRMARY.—Junior Assistant House Surgeon, for six months. Board and residence provided and an honorarium of £10 will be given after six months' satisfactory service.

UNIVERSITY COLLEGE, London.—Assistant Obstetric Physician.

WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, PARALYSIS AND EPILEPSY, 73, Welbeck-street, W.—Physician to Out-patients.

WHITEHAVEN AND WEST CUMBERLAND INFIRMARY, Whitehaven.—House Surgeon. Salary £120 per annum and £30 per annum for Dispensing, with furnished apartments and attendance.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton.—Honorary Gynæcologist.

Births, Marriages and Deaths.

BIRTHS.

COX.—On July 5th, at 78, Queen's-road, Watford, Herts, the wife of Alfred E. Cox., M.R.C.S., L.R.C.P., of a son.

DANE.—On July 5th, at Norland-square, wife of Surgeon-Major A. Dane, of a daughter.

DANNE.—On July 8th, at Queen's-road, New-cross-gate, S.E., the wife of Mr. William Danne, of a daughter.

HILL.—On July 4th, at St. Margaret's-mansions, S.W., the wife of Dr. W. J. Hill, of a daughter.

RICHARDS.—On July 8th, at 47, Churnet-street, Manchester, the wife of Arthur I. Richards, M.R.C.S.Eng., L.S.A. Lond., of a daughter.

SIBLEY.—On July 9th, at 7, Harley-street, Cavendish-square, Georgina Marie, the wife of W. Knowsley Sibley, M.A., M.D., B.C., M.R.C.P., of a son.

TOWNSEND.—On July 7th, at Normanby, near Middlesborough, the wife of F. E. Townsend, M.D., of a son.

WRENCH.—On July 9th, at The Woodhouse, Bath-street, Bakewell, the wife of E. Branson Wrench, M.B., B.C.Cantab., of a daughter.

WRIGHT.—On July 9th, at 4, Leinster-square, London, the wife of Dudley D'A. Wright, M.R.C.S., L.R.C.P.Lond., of a daughter.

MARRIAGES.

BEALE—BURBIDGE.—On July 12th, at Lyndhurst-road Church, Hampstead, by the Rev. R. F. Horton, M.A., Arthur A. Beale, M.B., C.M., son of the late J. H. Beale of Banbury, Oxon, to Marianne, daughter of John Burbidge, of Belsize-park-gardens, Hampstead.

BRODIE—CUNNINGHAM.—On July 6th, at The Mount, Cupar-Fife, Dr. James Brodie, 466, Edgware-road, London, W., to Christina Wiseman, second daughter of T. D. Cunningham, Esq.

BURROUGHS—CUMMING.—On July 4th, at Holy Trinity Church, Sloane-square, Leopold Burroughs, L.R.C.P.Lond., M.R.C.S., of Lee, Kent, to Carlotta Theresa, youngest daughter of the late Charles Cumming of Edinburgh.

HUDSON—BOOKER.—On July 5th, at St. Margaret's, Lee, Arthur Byrn Hudson, M.R.C.S., L.R.C.P.Lond., of Cobham, Surrey, to Thermuthis Rose, elder daughter of Frederick Booker of Lee, Kent.

MORISON—APPLEBY.—On July 5th, at St. John's Church, Greatham, by the Rev. W. W. Morrison, M.A., assisted by Rev. R. Waters, M.A., Albert E. Morison, M.B., C.M., F.R.C.S.Edin., of Hartlepool, to Etta, eldest daughter of J. Appleby, Esq., J.P., of Ashfield House, Greatham, co. Durham.

SHETTLE—WRIGHT.—On July 10th, at St. John's Church, Forton, Gosport, Richard Charles Shettle, M.D., of Reading, to Helen Mary, elder daughter of the late Captain C. M. M. Wright, R.N.

VERANO—VON ANDLAU.—On July 8th, at St. Mary-the-Crowned, Gibraltar, by His Lordship the Bishop of Lystra, Louis Lawrence Verano, M.R.C.S., L.R.C.P., L.S.A., of Gibraltar, to Eliza von Andlau, fourth daughter of Baron Andlau of Gibraltar.

DEATHS.

BROWNE.—On July 9th, at 14, Brunswick-square, London, W.C., William Browne, L.R.C.P.Edin., late of Stirling, aged 39 years.

LARKIN.—On July 5th, at Park-mansions, Lowestoft, Henry William Larkin, M.D., late of Bilston, aged 65 years.

NICHOLSON.—On July 5th, at 9, Park-crescent, Brighton, Samuel Nicholson, M.D., in his 87th year.

SHORTLAND.—On July 5th, at Plymouth, Edward Shortland, M.R.C.P.Lond., aged 81 years.

N.B.—A fee of 2s. is charged for the Insertion of Notices of Births, Marriages and Deaths.

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

PUBLISHER'S NOTICE.

IN order to facilitate the work of reference to the volumes of THE LANCET, we have arranged to publish duplicate copies of the Index to each half-yearly volume in a form in which they may be subsequently filed or bound together. Those of our subscribers who may wish to be supplied with loose copies can obtain the same (without extra charge) on making application to the Publisher of THE LANCET.

"THEODOTUS, PHYSICIAN AND BISHOP."

G. W. C. will find in the "Church History" of Eusebius (vii., 32, 23) an interesting reference to this medical ecclesiastic. "He was a man," says the historian, "whose life on earth corresponded to his name ('God-given'); for in the therapeutics of the human body he held the highest rank, and as to the cure of souls, love of one's neighbour, nobility of character, sympathy for others, as well as alacrity to render assistance, he had no equal." This light of medicine and theology was bishop of Laodicea about 305 A.D.—in other words, during the time of Diocletian's persecution of the Christians. He seems to have escaped the martyr's death, which overtook another celebrated physician and bishop, Zenobius of Ægea in Silicia, to say nothing of the equally eminent practitioner of the healing art who was also an ecclesiastic, Diomede of Tarsus, otherwise known as the "martyr of Nicea."

IODIDE RASH.

To the Editors of THE LANCET.

SIRS,—In Mr. Kennedy's practice at Plaistow I had occasion to see a patient, a young woman aged twenty-nine, suffering from gouty phlebitis, with acute inflammation, probably of a similar nature, of ankle joints and meta-tarso phalangeal articulation of left foot. The affected joints were treated with hot fomentations containing soda, which gave great relief, and a mixture prescribed containing iodide of potassium, colchicum wine and sulphate of magnesia. The following is the point of interest. After the third dose a rash appeared, which was seen within a few hours. The rash was distinctly vesiculated, and in some cases the vesicles were so close as almost to coalesce, and were excessively tense. It was confined chiefly to the wrists and the anterior surfaces of the forearms, legs, and thighs; there were none on the chest, back or face. In no case was there umbilication. In the course of twenty-four hours some vesicles had apparently desiccated, leaving a small purpuric area. Inasmuch as the patient was greatly alarmed, owing to the fact perhaps of the presence of variola in the locality, diagnosis was essential. It was evidently caused by the administration of small doses of iodide of potassium. From the profuse character of the rash and tensive condition of the vesicles, together with the presence of constitutional symptoms, slight headache and sickness, I thought the case might be of interest. The chief points of diagnosis seem to be the absence of umbilication, the somewhat limited area of distribution of the rash and the mild constitutional symptoms.

I am, Sirs, yours faithfully,

July 11th, 1893. P. S. HARRIS, M.R.C.S. Eng., L.R.C.P.

THE DISSEMINATION OF CHOLERA GERMS.

ACCORDING to some experiments lately carried out by Professor Uffelman of Rostock the danger of infection by the postal service is exceedingly great. A letter infected with cholera bacilli put, as in the ordinary way, into a postbag, was found after twenty-three hours and a half to be still covered with living bacilli. On postcards they were found living twenty hours after infection. On coins the bacilli died with remarkable rapidity, whereas on woollen and linen stuffs they enjoyed a particularly long life. He also made experiments with flies, which he found were most successful infection carriers. A fly, which had been infected by being put on to a mass of cholera bacilli, was placed on a piece of beef, which, after a time, was found to contain an enormous number of living bacteria.

AN APPEAL FOR PERIODICALS.

To the Editors of THE LANCET.

SIRS,—On Wednesday last we were favoured with a beautiful selection of flowers and fruit, forwarded by the Hope of Plaistow Good Templars Lodge, North-street Mission Hall (Mr. T. E. Keen, chairman), for the use of the patients here, who, of course, can have no visitors and whose convalescence is long and tedious. May I through your columns make an appeal for old magazines, illustrated papers or books for the use of the patients to while away a few of the monotonous hours compulsorily passed by them. The late Mr. A. Locker of the *Graphic* kept me fully supplied; but his untimely decease has cut off that source of supply, and no other has arisen hitherto to take its place.

I am, Sirs, yours obediently,
JOHN MOIR,
July 10th, 1893. Medical Superintendent.

PLASTIC BRONCHITIS.

PLASTIC BRONCHITIS forms the subject of a paper by Dr. Beschorner in *Volkmann's Klinische Vorträge*, No. 73. Perhaps the most interesting point in the paper is the result of the chemical and microscopical analysis to which the exudation in two cases was submitted by Professor Neilsen. According to this the bronchial casts, at any rate in chronic cases, are not composed of fibrin, but of thickened mucus—an old view revived.

RABIES IN MADEIRA AND THE AZORES.

IT is stated by the *Allgemeine Medicinische Central-Zeitung* of July 5th that rabies, from which Madeira and the Azores have hitherto been free, has been introduced into these islands through the importation of a dog owned by an English traveller. No less than nine persons were affected at the date of our German contemporary's information.

"AMMONIATED TINCTURE OF QUININE."

To the Editors of THE LANCET.

SIRS,—I think the following will relieve your correspondent "Dispenser" of his difficulty. As ammoniated tincture of quinine is a preparation in which the quinine exists as hydrate, kept in solution by means of excess of ammonia and by the rectified spirit, more especially the latter, consequently when it is mixed with much water the alkaloid is precipitated. Science cannot prevent the precipitation without inducing chemical change. The addition of a few drachms of mucilage will suspend the quinine equally throughout the mixture.

I am, Sirs, yours faithfully,
Hull, July 10th, 1893. FRED. BILBY.

To the Editors of THE LANCET.

SIRS,—If your correspondent, "Dispenser," will prescribe this tincture with liquor ammoniæ acetatis he will obtain a clear solution. I found this out during the influenza epidemic, when my favourite prescription was four drachms of the tincture with four ounces of the liquor and water to eight ounces. That it is not free acetic acid which keeps the quinine in solution is shown by mixing equal quantities of the tincture and the concentrated liquor. If a small quantity of water be added a cloudy mixture is the result; if more water be added the mixture will become perfectly clear. I am, Sirs, yours faithfully,
Lewisham, S.E., July 11th, 1893. E. W. FARMER.

To the Editors of THE LANCET.

SIRS,—In reply to "Dispenser," whose letter appeared in the last issue of THE LANCET, p. 121, may I be allowed to point out that, on the addition of water to the ammoniated tincture of quinine, quinine hydrate is precipitated, and must either be dissolved by the addition of spirit or suspended with mucilage. The latter course is the proper one.

I am, Sirs, yours faithfully,
July 10th, 1893. SCRIBO.

AMŒBÆ IN URINE.

A CURIOUS case of hæmaturia accompanied by the appearance of amœbæ in the urine is described by Dr. Posner in the *Berliner Klinische Wochenschrift*, No. 23. The case ran an intermittent course, and even seven months after the first appearance an attack occurred. The patient was a man, thirty-seven years of age and had always lived in Berlin.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, July 13th, 1893.

Date	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
July 7	29·96	S.E.	70	63	127	89	60	..	Bright
,, 8	29·71	S.	79	70	131	89	67	..	Bright
,, 9	29·73	S.W.	69	61	117	73	58	·22	Cloudy
,, 10	29·93	S.W.	65	62	118	76	59	·05	Cloudy
,, 11	29·69	S.	68	63	122	76	61	.	Cloudy
,, 12	29·53	S.E.	62	61	99	69	59	·22	Cloudy
,, 13	29·63	N.W.	64	61	91	66	59	·72	Cloudy

Medical Diary for the ensuing Week.

Monday, July 17.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays, at the same hour.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; and on Tuesday, Wednesday, Friday, and Saturday at the same hour.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2.30 P.M.; Friday, 2 P.M.
ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, daily at 10 A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M.; and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2 P.M.; Thursday, 2 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.; and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.
UNIVERSITY COLLEGE HOSPITAL. Ear and Throat Department, 9 A.M.; Thursday, 9 A.M. Eye Department, 2 P.M.

Tuesday, July 18.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Skin Department, 1.45; Saturday, 9.15.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electrotherapeutics, same day, 2 P.M.

Wednesday, July 19.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1.30 P.M.; Saturdays, 2 P.M. Obstetrical Operations, Thursdays, 2 P.M.
CHARING-CROSS HOSPITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M.; Thursday and Saturday, same hour.
ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M. Dental Department, 9.30 A.M. Eye Department, 2 P.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M Surgical Visits on Wednesday and Saturday at 9.15 A.M.

Thursday, July 20.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M. Ear and Throat Department, 9 A.M. Eye Department, 2 P.M.

Friday, July 21.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Eye Department, 2 P.M.

Saturday, July 22.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.

During the week marked copies of the following newspapers have been received:—*The Harrison Hot Springs Boiler (B.C.), Local Government Chronicle, Bristol Mercury, Mining Journal, City Press, Reading Mercury, Morning, Hertfordshire Mercury, Weekly Free Press and Aberdeen Herald, Liverpool Daily Post, Leeds Mercury, Yorkshire Post, Johnstone Advertiser, Guy's Hospital Gazette, West Cumberland Times, West Middlesex Advertiser, Surrey Advertiser, Forum (New York), Sanitary Record, Cheltenham Chronicle, Cork Examiner, Cork Herald, Devon and Exeter Gazette, Land and Water, Huddersfield Chronicle, The Sun, Church and Queen, Builder, Architect, Bognor Observer, Le Temps (Paris), Sunday Times, Times of India, Pioneer Mail, Critic (Hull), Lancashire Evening Express, Norwich Mercury, Wellington Journal and Shrewsbury News, Edgware Register, Wetherley News Shipping Gazette, Chard and Ilminster News, Malta Chronicle, Citizen, Scarborough Weekly Post, Scottish Leader, Bath Weekly Herald, Southend Echo, &c., &c.*

Communications, Letters &c. have been received from—

A.—Dr. A. G. Auld, Glasgow; Messrs. Allen and Hanburys, London; *Analyst, The*, Publishers of; A. S. G. [illegible]

B.—Dr. C. E. Baker, St. Albans; Dr. Arthur G. Blomfield, Exeter; Mr. W. Beates, Edinburgh; Mr. E. C. Blandford, Queenstown; Mr. T. B. Browne, London; Mr. C. Birchall, Liverpool; Mr. W. S. Battiss, Wickhambrook; Mr. A. J. Buckle, Great Yarmouth; Mr. B. Baskett, London; Messrs. F. B. Benger and Co., Manchester; Messrs. Burgoyne, Burbidges and Co., London; British Laryngological and Rhinological Association, Secretary of.

C.—Dr. Harry Campbell, London; Dr. W. Bruce Clarke, London; Dr. Arthur H. W. Clemow, London; Mr. J. Gillingham, Chard; Mr. M. Clifford, London; Miss Canning, London; Messrs. Crossley, Moir and Co., London; Messrs. Christy and Co., London; Country Town, London; Church of England Sanitary Association, Secretary of.

D.—Messrs. W. Dawson and Sons, London.

E.—Dr. L. Edmonds, Worcester (Mass); Mr. G. M. Edwards, Ealing; Messrs. Epstein and Co., London; E. C., London; Epsom College, Head Master of.

F.—Dr. E. W. Farmer, London; F. C. S.

G.—Dr. P. Goold, Macroon, co. Cork; Mr. H. W. G. Green, Devonport; Glasgow University, Assistant Clerk of; Great Eastern Railway Co., Continental Traffic Manager of; Guy's Hospital, Secretary of.

H.—Dr. F. de Havilland Hall, London; Mr. G. M. Howard, Nottingham; Mr. H. Hudson, Mannargudi, South India; Mr. A. A. Hargrave, Cork; Mr. R. H. Hadden, London; Mr. Harry Hollis, Northampton; Mr. J. Heywood, Manchester; Messrs. Hughes and Lancaster, London; Herren Hirschmann and Co., Hamburg; Halifax Infirmary, Secretary of.

I.—Messrs. A. and J. Inglis, Glasgow; Iakobe; Insomnia, London.

J.—Jarvis-Conklin Mortgage Trust Co., London, Vice-President of.

K.—Dr. R. Kirk, Glasgow; King's College Hospital, Secretary of.

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